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**2018 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE  
ACTION REPORT**

**ALABAMA POWER COMPANY  
PLANT GORGAS GYPSUM LANDFILL**



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## ABBREVIATIONS

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
CFR	Code of Federal Regulations
COC	chain of custody
DO	dissolved oxygen
EPA	United States Environmental Protection Agency
ft	feet
GW	groundwater
m	meter
mg/L	milligram per liter
MSL	mean sea level
MW-	denotes "Monitoring Well"
NELAP	National Environmental Laboratory Accreditation Program
NTU	nephelometric turbidity unit
ORP	oxidation reduction potential
pCi/L	picocuries per liter
PE	Professional Engineer
PG	Professional Geologist
PL	prediction limits
PQL	practical quantitation limit
PVC	polymerizing vinyl chloride
QA/QC	quality assurance/quality control
RL	reporting limit
RPD	relative percent difference
SM	Standard Method(s)
SSI	statistically significant increase
SSL	statistically significant level
TAL	Test America, Inc.
TOC	top of casing
TDS	total dissolved solids
USGS	United States Geological Survey

## **1.0 INTRODUCTION**

In accordance with the United States Environmental Protection Agency's (EPA) coal combustion residual (CCR) rule (40 C.F.R. Part 257, Subpart D) and the State of Alabama's ADEM Admin. Code Chapter 335-13-15, this 2018 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document the 2018 initial assessment and two semi-annual groundwater monitoring activities at the Plant Gorgas Gypsum Landfill and to satisfy the requirements of §257.90(e) and ADEM Admin. Code r. 335-13-15-.06(1)(f). Initial assessment monitoring, semi-annual monitoring, and associated reporting for Plant Gorgas Gypsum 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).

## **2.0 SITE LOCATION AND DESCRIPTION**

Alabama Power Company's William Crawford Gorgas Electric Generating Plant (Plant Gorgas) is located in southeastern Walker County, Alabama, approximately fifteen miles south of Jasper, at 460 Gorgas Road, Parrish, AL 35580. Based on visual inspection of 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 Gypsum Landfill is located east and northeast of the main power generation facility, respectively, and is bordered to the north by Highway 269 and to the south by the Mulberry Fork of the Black Warrior River. **Figure 1, Site Location Map**, depicts the location of the Plant and landfill with respect to the surrounding area.

## **3.0 SITE GEOLOGY AND HYDROGEOLOGY**

### **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 to over 500 feet MSL along a northwest trending ridge approximately 1,000 feet northwest of the plant and in upland areas on the western part of the property. Generally, near the landfill, the land surface slopes from north to south and towards the Mulberry Fork of the Warrior River.

### **3.2 Geology and Hydrogeology**

Plant Gorgas lies in the Warrior Basin physiographic region (Sapp and Emplaincourt, 1975), a late Paleozoic basin formed as a result of flexure and sediment loading associated with Appalachian and Ouachita orogenies. The bedrock geology is dominated by clastic sedimentary rocks of the Lower Pottsville Formation as shown on **Figure 2, Geologic Map** (GSA, 2010b). 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. Strip mining was conducted over a large portion of the area down to the American Seam. As a result, the overburden beneath the disposal facilities is dominated by backfilled mine overburden and is characterized by weathered shale

and sandstone boulders with lenses of fine sediments and small amounts of coal fragments and coarse sediments. Geologic logs generated during various on-site investigations indicate that the depth to rock varies significantly, ranging from as little as five feet (un-mined areas) to as much as 155 feet below ground surface (BGS).

Two water-bearing zones are present beneath the site: (1) the mine overburden/top-of-rock interface, and (2) the underlying Pottsville Aquifer. The first saturated zone beneath the site generally corresponds to the mine overburden/top of rock interface zone at which the mine-spoil overburden transitions to bedrock (Pottsville Formation). The average depth of the first saturated zone beneath the site is approximately 107 feet BGS. The depth of the first saturated zone is generally between 105 and 115 feet BGS near the CCR landfill with an average piezometric surface rising to 18 feet above the base of the screen.

### **3.3 Uppermost Aquifer**

The Pottsville aquifer is the uppermost aquifer beneath the site for groundwater monitoring purposes. Groundwater occurs in the Pratt Coal Group of the Lower Pottsville Formation at the site. The primary occurrences of groundwater in the uppermost aquifer are: (1) coal seams, (2) rock fractures or zones of fracture enhanced permeability, and to a lesser extent (3) bedding plains. Fractured intervals are sporadic across the site and tend to occur with greater density in the upper 100 feet of rock. Generally, groundwater yield at the site is considered low and typical of the Pottsville aquifer system. Wells were generally screened in the Pratt coal seam or across groundwater yielding fractures. Depth to groundwater producing zones were highly variable at the site and generally ranged from 30 to 240 feet BGS. Caliper, natural gamma, normal resistivity, fluid temperature, fluid resistivity logs, and heat pulse flowmeter logs were utilized to determine groundwater yielding zones. Packer testing was utilized in select borings to further enhance characterization.

Monitoring wells installed at the mine overburden – top of rock interface monitor quality of water passing to the Pottsville Formation. This water quality itself can be highly variable and enriched in trace metals owing to the heterogeneity of mine backfill deposits and mineralogy (clay minerals, sulfides, etc). Based on published data, groundwater quality produced from the Pottsville Formation can be characterized by high concentrations of sulfate, iron, and other trace metals (Jennings and Cook, 2010). Trace metals in Pottsville Formation groundwater are associated with sulfide minerals contained in organic-rich strata (e.g., Mudstones and Coal Seams) and siliceous/carbonate healed fractures and joints. Trace element enrichment is likely the result of migrating hydrothermal fluids generated during the late Paleozoic Allegheny orogeny

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(Diehl et al., 2004). Arsenic, antimony, molybdenum, selenium, copper, thallium, and mercury are elevated in Warrior Basin coal strata (Goldhaber et al., 2002).



#### **4.0 GROUNDWATER MONITORING SYSTEM AND ACTIVITY**

Pursuant to §257.91 and ADEM Admin. Code r. 335-13-15-.06(2), Plant Gorgas has installed a groundwater monitoring system to monitor groundwater within the uppermost aquifer. The certified groundwater monitoring system for the Plant Gorgas Gypsum 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 and 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. As required by §257.90(e) and ADEM Admin. Code r. 335-13-15-.06(1)(f), the following also describes monitoring related-activities performed during the preceding year.

##### **4.1 Groundwater Monitoring System**

The groundwater monitoring network is comprised of 11 monitoring wells. Monitoring well locations are presented on **Figure 3, Monitoring Well Location Map. Table 1, Groundwater Monitoring Well Network Details**, summarizes the monitoring well construction details and design purpose for the Plant Gorgas Gypsum Landfill

Monitoring well locations MW-1 through MW-4 and MW-13 through 15 serve as upgradient locations for the Gypsum Landfill. Upgradient wells are screened within the same hydrostratigraphic interval as downgradient locations and are representative of background groundwater quality at the site. Monitoring well locations MW-16, MW-18, MW-19, and MW-20 serve as downgradient locations for the Gypsum Landfill..

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

<b>Well ID</b>	<b>Purpose</b>	<b>Northing</b>	<b>Easting</b>	<b>Total Depth</b>	<b>TOC Elevation</b>	<b>Ground Elevation (feet MSL)</b>	<b>Top of Screen Elevation (feet MSL)</b>	<b>Bottom of Screen Elevation (feet MSL)</b>
MW-1	Upgradient	1330794.064	594082.361	104.10	502.38	499.19	405.10	395.10
MW-2	Upgradient	1331053.309	593548.802	90.60	502.17	498.54	417.90	407.90
MW-3	Upgradient	1330842.402	593025.397	115.10	525.90	522.23	417.10	407.10
MW-4	Upgradient	1330289.727	592896.414	126.30	517.89	516.67	400.40	390.40
MW-13	Upgradient	1329383.939	595088.06	105.60	445.29	442.04	346.40	336.40
MW-14	Upgradient	1329549.381	595627.606	100.10	430.20	426.90	336.80	326.80
MW-15	Upgradient	1329680.612	595932.099	84.30	406.05	403.10	329.10	319.10
MW-16	Downgradient	1328655.721	596399.878	106.60	414.68	411.57	315.00	305.00
MW-18	Downgradient	1327977.419	595793.776	114.60	415.09	411.42	306.80	296.80
MW-19	Downgradient	1327697.305	595251.571	98.10	378.53	375.11	290.40	280.40
MW-20	Downgradient	1327792.527	594841.227	70.30	332.88	329.89	269.60	259.60

Notes: 1. Northing and easting are in feet relative to the State Plane Alabama West North America Datum of 1983.  
 2. Elevations are in feet relative to the North American Vertical Datum of 1988.

#### 4.2 Monitoring Well Installation and Maintenance

There was no change to the groundwater monitoring system in 2018; the network remained the same as in the 2017 (previous) reporting year. Monitoring well-related activities were limited to the following: Visual inspection of well conditions prior to sampling, recording the site conditions, and performing exterior maintenance to perform sampling under safe and clean conditions.

#### 4.3 Assessment Monitoring

Based on results of the 2017 Annual Groundwater and Corrective Action Monitoring Report, Alabama Power 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. Pursuant to 40 CFR §257.95(d) and ADEM Admin. Code r. 335-13-15-.06(6)(d), monitoring wells were subsequently sampled for Appendix III and Appendix IV parameters in May and November 2018. The May 2018 event was conducted within 90 days of obtaining the results from the February 2018 sampling event. Samples were collected from wells in the Professional Engineer (PE)-certified monitoring systems shown on **Figure 3**. A summary of groundwater sampling events completed in 2018 is provided in **Table 2, Compliance Sampling Events Summary**.

Analytical data from the initial assessment and semi-annual monitoring events are included as **Appendix A, Groundwater Analytical Data**, in accordance with the requirements of §257.90(e)(3) and ADEM Admin. Code r. 335-13-15-.06(1)(f)3.

<b>Table 2. Compliance Sampling Events Summary</b>			
	<b>Sampling Purpose</b>	<b>Constituents Sampled</b>	<b>Laboratory Receipt Date</b>
Compliance Event 1	Initial Assessment	Appendix IV	4/13/2018
Compliance Event 2	Assessment Monitoring	Appendices III and IV	7/3/2018
Compliance Event 3	Assessment Monitoring	Appendices III and IV	12/28/2018

#### 4.4 Additional Groundwater Sampling

Additional groundwater sampling was performed in April and November to further characterize groundwater quality at the site. Groundwater samples were collected following the procedures described in Section 5.0. Analytical results are included in **Appendix A**.

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Additional sampling was completed for the following analytes:

- Alkalinity, Total
- Bicarbonate Alkalinity
- Carbonate Alkalinity
- Conductivity
- Dissolved Oxygen
- Iron, Dissolved
- Iron, Total
- Magnesium, Total
- Manganese, Dissolved
- Manganese, Total
- ORP
- pH
- pH for Alkalinity
- Potassium, Total
- Sodium, Total
- Temperature
- Turbidity

## 5.0 SAMPLING METHODOLOGY AND ANALYSIS

The following describes the methods used to conduct assessment monitoring at the Plant Gorgas Gypsum Landfill.

### 5.1 Groundwater Flow Direction, Gradient, and Velocity

Prior to each sampling event, groundwater levels were measured and recorded to the nearest 0.01 foot within a 24-hour period from the certified well network and piezometers. Groundwater levels recorded during the monitoring events are summarized in **Table 3, Groundwater Elevations Summary 2018**. Groundwater levels and top of casing elevations were used to calculate groundwater elevation and develop the potentiometric surface elevation contour map provided as **Figures 4 through 6, Potentiometric Surface Contour Map(s)**. The general direction of groundwater flow is lateral to the southeast. The groundwater flow pattern observed during the 2018 monitoring events is consistent with historic observations.

<b>Table 3</b>				
<b>Groundwater Elevations Summary 2018</b>				
<b>Well ID</b>	<b>Top of Casing Elevation (feet MSL)</b>	<b>Groundwater Elevations (feet MSL)</b>		
		<b>Feb-18</b>	<b>May-18</b>	<b>Nov-18</b>
		MW-1	502.38	411.02
MW-2	502.17	419.34	417.38	417.72
MW-3	525.90	418.49	416.28	416.31
MW-4	517.89	401.93	401.50	401.34
MW-13	445.29	351.78	350.88	351.17
MW-14	430.20	341.21	341.03	341.06
MW-15	406.05	339.32	339.09	339.13
MW-16	414.68	325.39	323.47	324.27
MW-18	415.09	299.64	303.05	299.44
MW-19	378.53	297.44	297.09	297.05
MW-20	332.88	311.20	310.82	311.60

Groundwater flow rates at the site were calculated based on hydraulic gradients, hydraulic conductivity from previous slug test results, and an estimated effective porosity of the screened horizon. Slug testing provided horizontal hydraulic conductivities for the uppermost aquifer between  $5.11 \times 10^{-3}$  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 ft/day. An estimated effective porosity of 0.015 is used in the flow rate calculations. The hydraulic gradient was calculated between well pairs shown on **Table 4, Flow Rate Calculations**. An effective porosity of 15% was used.

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 ( $\frac{feet}{day}$ )
- $K$  = Average permeability of the aquifer ( $\frac{feet}{day}$ )
- $i$  = Horizontal hydraulic gradient
- $n_e$  = Effective porosity

Using this equation, groundwater flow velocities are calculated for various areas of the site and are tabulated on **Table 4**. **Table 4** presents the velocities calculated using groundwater elevation data from the sampling events in 2018.

<b>TABLE 4. Flow Rate Calculations</b>								
<b>Date</b>	<b>K</b>	<b><math>\eta_e</math></b>	<b>MW-2</b>	<b>MW-20</b>	<b><math>\Delta h</math></b>	<b>L</b>	<b>i</b>	<b>v</b>
5/21/2018	8.01	0.15	417.33	310.82	106.51	3,507	0.030	1.60
<b>Date</b>	<b>K</b>	<b><math>\eta_e</math></b>	<b>MW-3</b>	<b>MW-6</b>	<b><math>\Delta h</math></b>	<b>L</b>	<b>i</b>	<b>v</b>
5/21/2018	8.01	0.15	416.28	314.16	102.12	2,970	0.034	1.82
<b>Date</b>	<b>K</b>	<b><math>\eta_e</math></b>	<b>MW-14</b>	<b>MW-19</b>	<b><math>\Delta h</math></b>	<b>L</b>	<b>i</b>	<b>v</b>
5/21/2018	8.01	0.15	341.03	297.09	43.94	1,890	0.023	1.23

As presented on **Table 4**, groundwater flow velocity at the site ranges from approximately 1.23 feet/day to 1.82 feet/day across the Pottsville aquifer at the site. These calculated groundwater flow velocities across the site are consistent with expected velocities in the uppermost aquifer. Calculated gradients and flow rates do not consider vertical flow gradients.

## 5.2 Groundwater Sampling

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

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

During purging and sampling a SmarTroll instrument was used to monitor and record field parameters. Once stabilization was achieved, samples were collected and submitted to the laboratory following standard chain-of-custody (COC) protocol.

## 5.3 Laboratory Analysis

Laboratory analyses was performed by the APC Environmental Laboratory (APCEL) in Calera, Alabama or Test America, Inc. (TAL), of Pensacola, Florida and St. Louis, Missouri. Both APCEL and TAL are accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintain a NELAP certification for all parameters analyzed. Groundwater data and chain of custody records for the monitoring events are presented in **Appendix A**.

## 5.4 Quality Assurance/Quality Control

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at a rate of one sample per every 10 detection samples. Equipment blanks and duplicate samples were also collected during each sampling event. QA/QC sample data was evaluated during data validation and is included in **Appendix A**.

Groundwater quality data for the most recent sampling event was validated for the most recent sampling event following guidance from the EPA Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (November 2001); the EPA Region IV Data Validation Standard

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Operating Procedures (US EPA Region IV, September 2011); and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences, post digestion spikes, laboratory and field duplicate RPDs, field and equipment blanks, and reporting limits.

Where appropriate, validation qualifiers and flags are applied to the data using the procedures in EPA National Functional Guidelines for Inorganic Data Review (USEPA, 2014), as guidance. Flagged data is identified in the statistical analysis reports.



## 6.0 STATISTICAL ANALYSIS

Statistical analysis of Appendix III and IV groundwater monitoring data was performed on samples collected from the certified groundwater monitoring network pursuant to 40 CFR §257.93 and ADEM Admin. Code r. 335-13-15-.06(4) and following the appropriate PE-certified method. The statistical method used at the site was developed by Groundwater Stats Consulting, LLC. (GSC), in accordance with 40 CFR §257.93(f) and ADEM Admin. Code r. 335-13-15-.06(4)(f) using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, EPA 530/R-09-007 (USEPA, 2009).

### 6.1 Statistical Methods

The Sanitas groundwater statistical software was 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 USEPA regulations. Although Assessment Monitoring has been implemented, statistical evaluation of Appendix III constituents is performed to determine if constituents have returned to background conditions. Statistical analysis was performed using methods described in the PE-certified statistical analysis plan for the site.

#### 6.1.1 Appendix III Constituents

Statistical tests used to evaluate the groundwater monitoring data consist of interwell and intrawell prediction limits combined with a 1-of-2 verification resample plan for each of the Appendix III parameters. Intrawell prediction limits combined with a 1-of-2 verification resample plan are used to evaluate calcium, chloride, fluoride, sulfate and TDS; while interwell prediction limits combined with a 1-of-2 resample plan are used to evaluate 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.

A summary table of the statistical limits accompanies the prediction limits in **Appendix B, Statistical Data Evaluation**.

### 6.1.2 Assessment Monitoring Statistics

Parametric tolerance limits were used to calculate background limits from pooled upgradient well data for Appendix IV parameters with a target of 95% confidence and 95% coverage. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. The background limits were then used when determining the groundwater protection standard (GWPS).

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

- (1) The maximum contaminant level established under §141.62 and 141.66 of this title (the “MCL”).
- (2) Where an MCL has not been established:
  - (i) Cobalt 6 micrograms per liter (ug/l);
  - (ii) Lead 15 ug/l;
  - (iii) Lithium 40 ug/l; and
  - (iv) Molybdenum 100 ug/l.
- (3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

Existing ADEM Admin Code r. 335-13-15 includes boron as an Appendix IV assessment monitoring parameter; therefore, it is included in the statistical analysis for the site. As explained in the Preamble to the federal CCR rule, the GWPSs listed above for cobalt, lead, lithium, and molybdenum are USEPA-established “Regional Screening Levels” (RSLs) that are used where an MCL has not been established. Following the procedure used by USEPA for the federal CCR rule, the USEPA-established RSL for boron (4.0 mg/L) was used as a GWPS for statistical comparison of boron data. **Table 5, Summary of Background Levels and Groundwater Protection Standards**, summarizes the background limit established at each monitoring well and the GWPS.

<b>Table 5. Summary of Background Levels and Groundwater Protection Standards</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	0.0156, 0.01553	2
Beryllium	mg/L	0.007, 0.0185	0.004
Boron	mg/L	0.06795, 0.06755	4.0
Cadmium	mg/L	0.0047	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.3635, 0.3753	0.006
Fluoride	mg/L	0.4661, 0.4604	4
Lead	mg/L	0.005, 0.00692	0.015
Lithium	mg/L	0.237, 0.323	0.04
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
Total Radium-226/228	pCi/L	1.91	5

**Notes:**

1. Where 2 numbers are present, they denote the different background levels and background-derived GWPS for each of the 2 semi-annual monitoring events in the order that they were determined.

**6.2 Statistical Analysis Results**

Analytical data from the 2018 semi-annual monitoring events in May and November were statistically analyzed in accordance with the PE-certified Statistical Analysis Plan (October 2017). Appendix III statistical analysis was performed to determine if constituents have returned to background levels. Appendix IV assessment monitoring parameters were evaluated to determine if concentrations statistically exceeded the established groundwater protection standard.

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

### **6.2.1 First Semi-Annual Groundwater Monitoring Event**

Statistical analysis of Appendix IV data identified the following exceedance of a GWPS at statistically significant levels (SSLs) at the listed wells:

- MW-20: Lithium.

### **6.2.2 Second Semi-Annual Groundwater Monitoring Event**

Review of the Sanitas results presented in Appendix B did not identify any SSLs during the second semi-annual detection monitoring event.

## 7.0 ALTERNATE SOURCE DEMONSTRATION

Section 257.95(g)(3) and ADEM Admin. Code r. 335-13-15-.06(6)(g)4 allows 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 resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

SSLs identified during the first semi-annual sampling event are not the result of a release from the Gypsum Landfill. Alabama Power Company (APC) began construction on the Plant Gorgas Gypsum Landfill in 2011. Permit 64-10 was effective beginning January 8th, 2016. To date, no gypsum has been placed in the gypsum landfill. Therefore, groundwater quality from this well represents conditions not affected by the disposal unit and represents natural variation in groundwater quality.

The SSL for lithium was not confirmed during the subsequent second semi-annual sampling event. Since the SSL was not confirmed in subsequent sampling and was only a single-parameter exceedance, we conclude that the SSL was the result of errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. In accordance with §257.95(g)(3) and ADEM Admin. Code r. 335-13-15-.06(6)(g)4, this Alternate Source Demonstration (ASD) demonstrated that the SSL was not the result of a release from the Gypsum Landfill.

An ASD report for SSLs identified during the first semi-annual detection monitoring event is included as **Appendix C, Alternate Source Demonstration.**

## **8.0 MONITORING PROGRAM STATUS**

In accordance with §257.94(e) and ADEM Admin. Code r. 335-13-15-.06(5)(e), APC implemented assessment monitoring in January 2018. SSIs of Appendix III and SSLs of Appendix IV parameters were identified at the Plant Gorgas Gypsum Landfill during sampling events conducted in 2018. In accordance with 40 CFR §257.95(g)(3)(i) and ADEM Admin. Code r. 335-13-15-.06(6)(g)4, APC prepared an alternate source demonstration (ASD) Appendix IV constituent exceeding the GWPS. A complete ASD report is provided in **Appendix C**. In accordance with §257.95(g)(3) and ADEM Admin. Code r. 335-13-15-.06(6)(g)4(i), APC will remain in assessment monitoring and will not implement assessment of corrective measures required by §257.96 and ADEM Admin. Code r. 335-13-15-.06(7).

## **9.0 CONCLUSIONS AND FUTURE ACTIONS**

Based on results reported in the 2017 Annual Groundwater and Corrective Action Monitoring Report, APC initiated an assessment monitoring program on January 15, 2018. Groundwater samples were subsequently collected from the certified well network and analyzed for Appendix IV parameters.

The certified compliance monitoring well network was resampled on a semi-annual basis, occurring in May and November 2018. The groundwater samples were analyzed for all Appendix III & IV parameters. The data from the semi-annual events were statistically evaluated relative to GWPS. Statistical evaluations of the May and November 2018 assessment monitoring data identified SSLs of Appendix IV constituents above the GWPS.

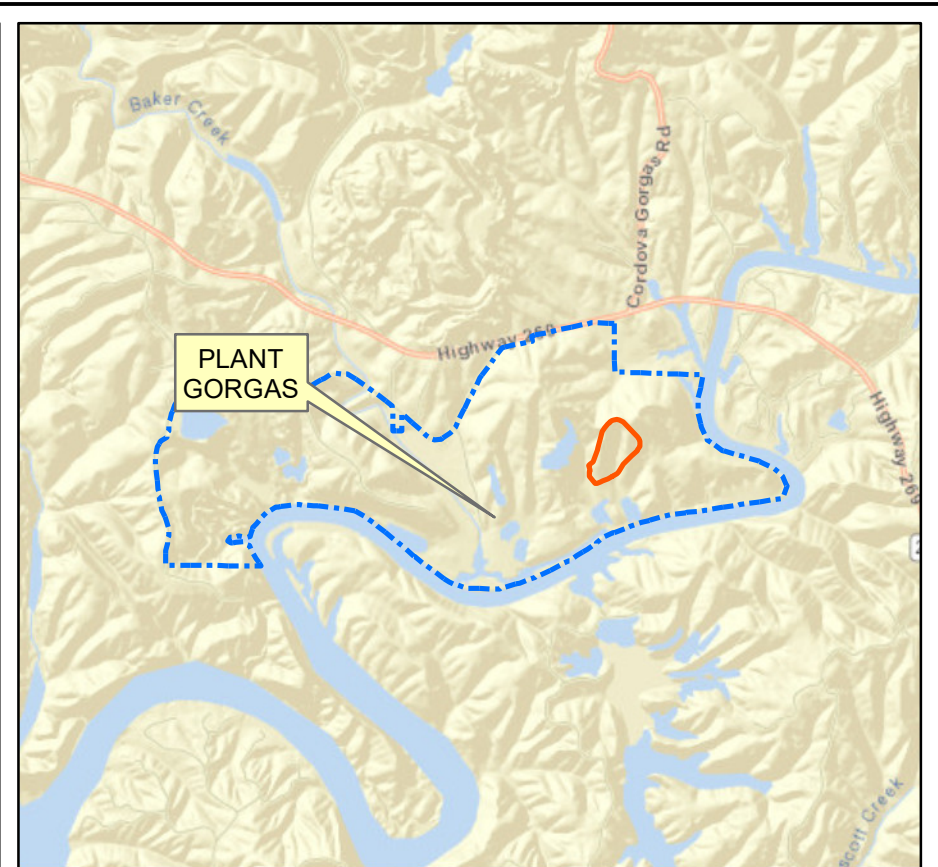
An ASD has been completed for the Appendix IV constituent exceeding the GWPS; therefore, in accordance with §257.95(g)(3)(ii) and ADEM Admin. Code r. 335-13-15-.06(6)(g)4(ii), APC will continue assessment monitoring and will not implement assessment of corrective measures described in §257.96 and ADEM Admin. Code r. 335-13-15-.06(7). The first semi-annual assessment monitoring event is planned for April or May 2019.

## 10.0 REFERENCES



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

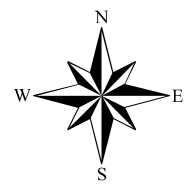


# Figures



**Legend**

-  Property Boundary (Approximate)
-  Gypsum Landfill Boundary (Approximate)



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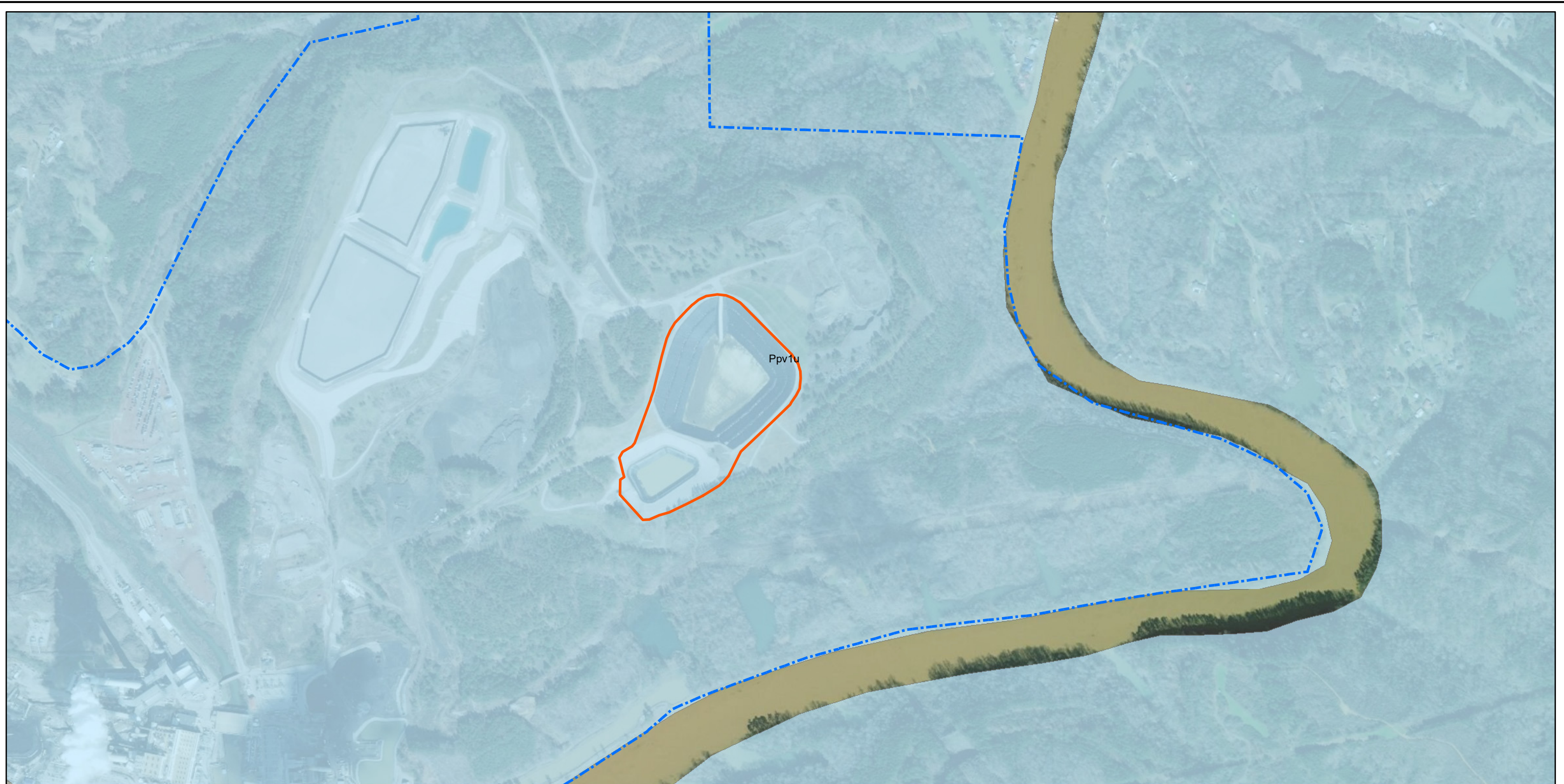
**Southern Company Generation  
Earth Science and Environmental Engineering**

**FOR**



**Alabama Power Company**

**FIGURE 1  
SITE LOCATION MAP  
PLANT GORGAS GYPSUM LANDFILL**


SCALE	PROJ. I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
1:9K		FIGURE 1	1		

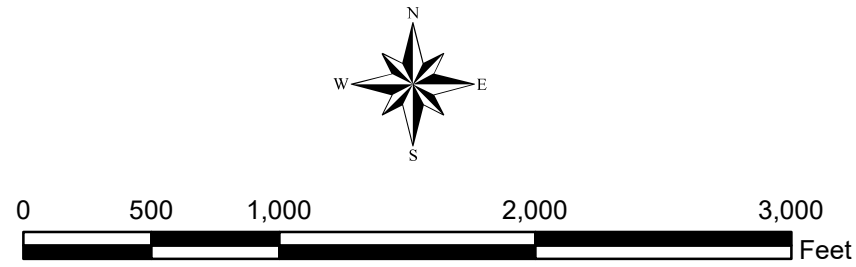


**Legend**

-  Property Boundary (Approximate)
-  Gypsum Landfill Boundary (Approximate)

**Geologic Units**

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



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**FIGURE 2**  
**SITE GEOLOGIC MAP**  
**PLANT GORGAS GYPSUM LANDFILL**

**Southern Company Generation**  
**Earth Science and Environmental Engineering**

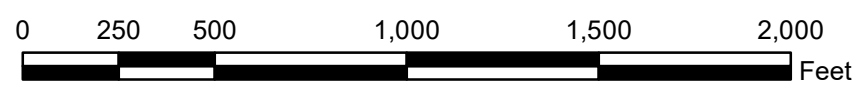
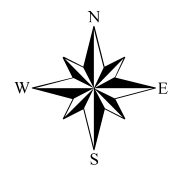
**FOR**

<b>Alabama Power Company</b>					
SCALE	PROJ I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
1:9k		FIGURE 2	1		



**Legend**

- ◆ Monitoring Well
- Gypsum Landfill Boundary (Approximate)



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**FIGURE 3**  
GROUNDWATER MONITORING NETWORK MAP  
PLANT GORGAS GYPSUM LANDFILL

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**Earth Science and Environmental Engineering**





FOR

**Alabama Power Company**

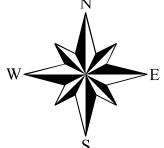
SCALE	PROJ I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
1:6k		FIGURE 3	1		




**Legend**

	Gypsum Landfill Boundary (Approximate)
	Monitoring Well
	Potentiometric Surface Contour (ft NAVD88)
	Approximate Groundwater Flow Direction

MW-1	Well ID
411.02	Groundwater Elevation





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

NOTE: NAVD88 indicates North American Vertical Datum of 1988.

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**FIGURE 4**  
**POTENTIOMETRIC SURFACE MAP**  
**FEBRUARY 2018**  
**PLANT GORGAS GYPSUM LANDFILL**

**Southern Company Generation**  
**Earth Science and Environmental Engineering**

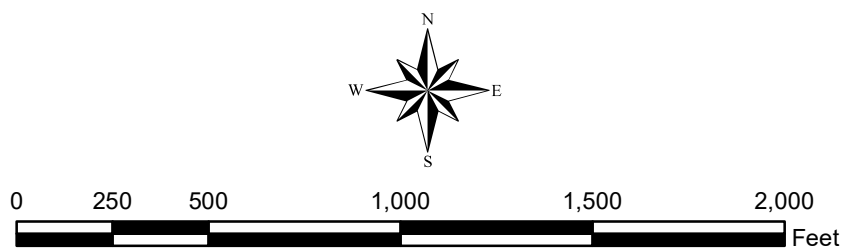
**FOR**

**Alabama Power Company**

SCALE	PROJ. I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
1:6k		FIGURE 4	1		



Legend	
	Monitoring Well
	Gypsum Landfill Boundary (Approximate)
	Potentiometric Surface Contour (ft NAVD88)
	Approximate Groundwater Flow Direction
	MW-1 Well ID 411.6 Groundwater Elevation



NOTE: NAVD88 indicates North American Vertical Datum of 1988.

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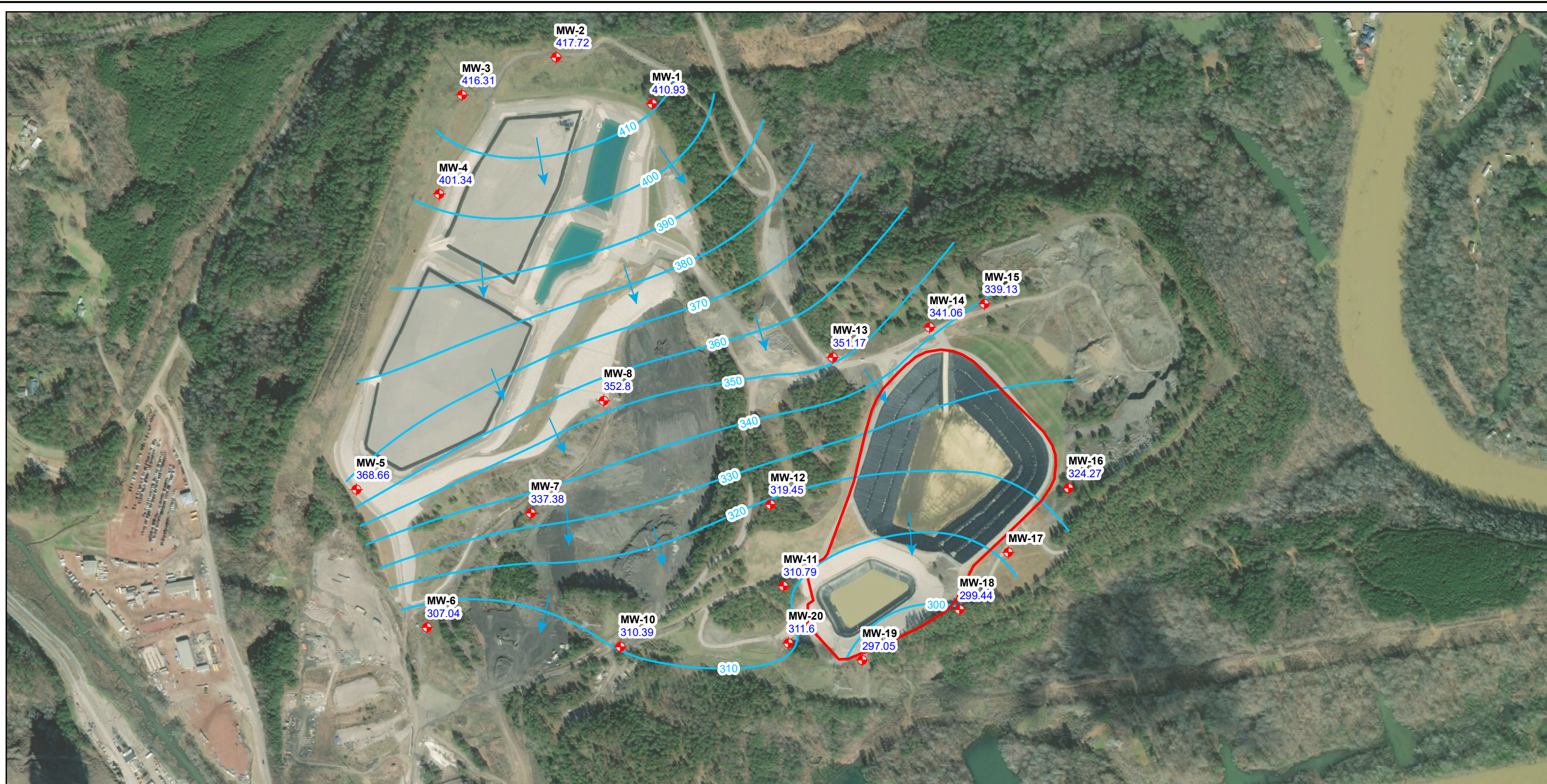
**FIGURE 5**  
**POTENTIOMETRIC SURFACE MAP**  
 MAY 2018  
**PLANT GORGAS GYPSUM LANDFILL**

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**Earth Science and Environmental Engineering**

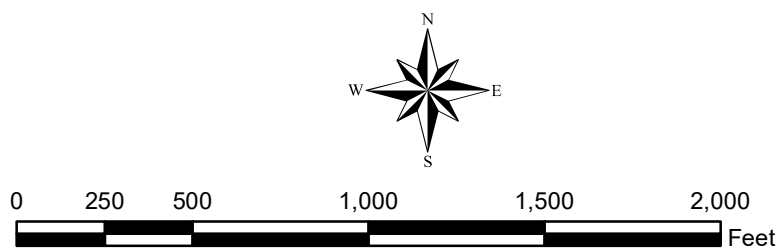
**FOR**

**Alabama Power Company**

SCALE	PROJ. I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
1:6k		FIGURE 5	1		



Legend		
	Monitoring Well	
	Gypsum Landfill Boundary (Approximate)	
	Potentiometric Surface Contour (ft NAVD88)	
	Approximate Groundwater Flow Direction	
	<b>MW-1</b>	Well ID
	410.93	Groundwater Elevation



NOTE: NAVD88 indicates North American Vertical Datum of 1988.

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**FIGURE 6**  
**POTENTIOMETRIC SURFACE MAP**  
**NOVEMBER 2018**  
**PLANT GORGAS GYPSUM LANDFILL**

**Southern Company Generation**  
**Earth Science and Environmental Engineering**

**FOR**

<b>Alabama Power Company</b>					
SCALE	PROJ I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
1:6k		FIGURE 6	1		

# Appendix A



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

## ***Field Case Narrative***



# **Gorgas Bottom Ash Landfill**

## **Assessment 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).

Light rain moved into the area while pumping and sampling well MW-15. Red flock was noticed while pumping well MW-8.

Field quality control procedures were performed as follows:

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

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

# Analytical Report



**Sample Group :** WMWGORLF\_1137  
**Project/Site :** Gorgas Landfill  
Parrish, AL 35580  
**For :** Southern Company Services  
42 Inverness Center Parkway  
Birmingham, AL 35242  
**Attention :** Dustin Brooks & Greg Dyer  
**Released By :** Sarah Copeland  
sgcopela@southernco.com  
(205) 664-6121

The following data has been reviewed and approved by:

**Quality Control:** Sarah Copeland

Digitally signed by Sarah Copeland  
DN: cn=Sarah Copeland, o, ou,  
email=sgcopela@southernco.com,  
c=US  
Date: 2018.03.15 16:08:41 -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: 2018.03.23 15:02:57 -05'00'

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

## Case Narrative



Fluoride

Gorgas Landfill

WMWGORLF\_1137

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. All samples were received intact and properly preserved.
3. All samples were outsourced to Test America, Pensacola for analysis. There was no job narrative provided, as there were no issues.



Metals ICP

Gorgas Landfill

WMWGORLF\_1137

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY04108	20180226CK	WMWGORLF_1137
AY04109	20180226CK	WMWGORLF_1137
AY04110	20180226CK	WMWGORLF_1137
AY04111	20180226CK	WMWGORLF_1137
AY04112	20180226CK	WMWGORLF_1137
AY04113	20180226CK	WMWGORLF_1137
AY04118	20180226CK	WMWGORLF_1137
AY04119	20180226CK	WMWGORLF_1137
AY04120	20180226CK	WMWGORLF_1137
AY04121	20180226CK	WMWGORLF_1137
AY04122	20180228DK	WMWGORLF_1137
AY04123	20180228DK	WMWGORLF_1137
AY04124	20180228DK	WMWGORLF_1137
AY04125	20180228DK	WMWGORLF_1137
AY04126	20180228DK	WMWGORLF_1137
AY04127	20180228DK	WMWGORLF_1137
AY04128	20180228DK	WMWGORLF_1137
AY04129	20180228DK	WMWGORLF_1137
AY04130	20180228DK	WMWGORLF_1137
AY04131	20180228DK	WMWGORLF_1137
AY04114	20180226BDLK	WMWGORLF_1137
AY04115	20180226BDLK	WMWGORLF_1137
AY04116	20180226BDLK	WMWGORLF_1137
AY04117	20180226BDLK	WMWGORLF_1137

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.
7. All samples were analyzed at a x2.03 dilution to compensate for potential matrix effects.
  8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF\_1137

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY04108	613330	WMWGORLF_1137
AY04109	613330	WMWGORLF_1137
AY04110	613330	WMWGORLF_1137
AY04111	613330	WMWGORLF_1137
AY04112	613330	WMWGORLF_1137
AY04113	613330	WMWGORLF_1137
AY04118	613330	WMWGORLF_1137
AY04119	613330	WMWGORLF_1137
AY04120	613330	WMWGORLF_1137
AY04121	613330	WMWGORLF_1137
AY04122	613331	WMWGORLF_1137
AY04123	613331	WMWGORLF_1137
AY04124	613331	WMWGORLF_1137
AY04125	613331	WMWGORLF_1137
AY04126	613331	WMWGORLF_1137
AY04127	613331	WMWGORLF_1137
AY04128	613331	WMWGORLF_1137
AY04129	613331	WMWGORLF_1137
AY04130	613331	WMWGORLF_1137
AY04131	613331	WMWGORLF_1137
AY04114	613343	WMWGORLF_1137
AY04115	613343	WMWGORLF_1137
AY04116	613343	WMWGORLF_1137
AY04117	613343	WMWGORLF_1137

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



### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. All samples were analyzed at a dilution of 1 to 5 to compensate for any matrix effects.
  8. The raw data results are shown with dilution factors included.



Mercury

Gorgas Landfill

WMWGORLF\_1137

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY04108	612910	WMWGORLF_1137
AY04109	612910	WMWGORLF_1137
AY04110	612910	WMWGORLF_1137
AY04111	612910	WMWGORLF_1137
AY04112	612910	WMWGORLF_1137
AY04113	612910	WMWGORLF_1137
AY04118	612910	WMWGORLF_1137
AY04119	612910	WMWGORLF_1137
AY04120	612910	WMWGORLF_1137
AY04121	612910	WMWGORLF_1137
AY04122	612911	WMWGORLF_1137
AY04123	612911	WMWGORLF_1137
AY04124	612911	WMWGORLF_1137
AY04125	612911	WMWGORLF_1137
AY04126	612911	WMWGORLF_1137
AY04127	612911	WMWGORLF_1137
AY04128	612911	WMWGORLF_1137
AY04129	612911	WMWGORLF_1137
AY04130	612911	WMWGORLF_1137
AY04131	612911	WMWGORLF_1137
AY04114	612904	WMWGORLF_1137
AY04115	612904	WMWGORLF_1137
AY04116	612904	WMWGORLF_1137
AY04117	612904	WMWGORLF_1137

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





### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

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

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY04108

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0114	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	0.0989	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.33	mg/L

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY04108

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115		97.0	70 to 130	0.624	20
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115		94.8	70 to 130	1.15	20
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115		95.9	70 to 130	2.05	20
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115		103	70 to 130	0.466	20
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115		103	70 to 130	0.916	20
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115		108	70 to 130	0.465	20
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23		91.8	70 to 130	1.44	20
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046		98.4	70 to 130	0.0254	20
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115		101	70 to 130	1.78	20
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115		93.6	70 to 130	1.50	20
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115		94.4	70 to 130	5.29	20
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115		101	70 to 130	6.33	20
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115		93.1	70 to 130	0.0347	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY04108

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY04109

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	J 0.00493	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0142	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0305	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	0.242	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.13	mg/L

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY04109

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115	97.0	70 to 130	0.624	20	
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115	103	70 to 130	0.466	20	
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.916	20	
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115	101	70 to 130	1.78	20	
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115	93.6	70 to 130	1.50	20	
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115	94.4	70 to 130	5.29	20	
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115	101	70 to 130	6.33	20	
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115	93.1	70 to 130	0.0347	20	
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.465	20	
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23	91.8	70 to 130	1.44	20	
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046	98.4	70 to 130	0.0254	20	
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115	94.8	70 to 130	1.15	20	
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115	95.9	70 to 130	2.05	20	

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY04109

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS		Rec		Prec	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY04110

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	J 0.00131	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0119	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	0.131	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.18	mg/L

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY04110

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115	97.0	70 to 130	0.624	20	
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115	103	70 to 130	0.466	20	
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.916	20	
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115	94.8	70 to 130	1.15	20	
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115	95.9	70 to 130	2.05	20	
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115	101	70 to 130	1.78	20	
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115	93.6	70 to 130	1.50	20	
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115	94.4	70 to 130	5.29	20	
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115	101	70 to 130	6.33	20	
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115	93.1	70 to 130	0.0347	20	
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.465	20	
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23	91.8	70 to 130	1.44	20	
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046	98.4	70 to 130	0.0254	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY04110

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY04111

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	J 0.00185	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0126	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00441	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	0.183	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.21	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY04111

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115		97.0	70 to 130	0.624	20
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115		94.4	70 to 130	5.29	20
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115		101	70 to 130	6.33	20
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115		93.1	70 to 130	0.0347	20
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115		103	70 to 130	0.466	20
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115		103	70 to 130	0.916	20
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115		94.8	70 to 130	1.15	20
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115		95.9	70 to 130	2.05	20
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115		101	70 to 130	1.78	20
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115		93.6	70 to 130	1.50	20
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115		108	70 to 130	0.465	20
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23		91.8	70 to 130	1.44	20
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046		98.4	70 to 130	0.0254	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY04111

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY04112

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY04112

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115	97.0	70 to 130	0.624	20	
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115	101	70 to 130	1.78	20	
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115	93.6	70 to 130	1.50	20	
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115	94.4	70 to 130	5.29	20	
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115	101	70 to 130	6.33	20	
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115	93.1	70 to 130	0.0347	20	
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115	94.8	70 to 130	1.15	20	
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115	95.9	70 to 130	2.05	20	
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.465	20	
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23	91.8	70 to 130	1.44	20	
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046	98.4	70 to 130	0.0254	20	
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115	103	70 to 130	0.466	20	
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.916	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY04112

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:



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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-6 Dup

Laboratory ID Number: AY04113

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	0.00502	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0145	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0301	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	0.240	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.13	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-6 Dup

Laboratory ID Number: AY04113

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115		97.0	70 to 130	0.624	20
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115		94.8	70 to 130	1.15	20
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115		95.9	70 to 130	2.05	20
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115		101	70 to 130	1.78	20
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115		93.6	70 to 130	1.50	20
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115		103	70 to 130	0.466	20
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115		103	70 to 130	0.916	20
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115		108	70 to 130	0.465	20
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23		91.8	70 to 130	1.44	20
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046		98.4	70 to 130	0.0254	20
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115		94.4	70 to 130	5.29	20
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115		101	70 to 130	6.33	20
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115		93.1	70 to 130	0.0347	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-6 Dup

Laboratory ID Number: AY04113

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Rec	Prec	Prec	Limit

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY04114

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0111	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/20/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	J 0.0446	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00403	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.38	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY04114

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			Limit	MB					Limit	Rec	Limit	Prec		
AY04114	Molybdenum, Total	mg/L	0.0000119	0.0044	0.10	0.0920	0.0920	0.0909	0.085 to 0.115		92.0	70 to 130		0.0036620
AY04114	Antimony, Total	mg/L	0.0000468	0.00132	0.10	0.0969	0.0975	0.0974	0.085 to 0.115		96.9	70 to 130		0.576 20
AY04114	Thallium, Total	mg/L	0.00000381	0.00044	0.10	0.0945	0.0955	0.102	0.085 to 0.115		94.5	70 to 130		1.07 20
AY04114	Chromium, Total	mg/L	0.0000136	0.0044	0.10	0.0937	0.0938	0.0943	0.085 to 0.115		93.7	70 to 130		0.106 20
AY04114	Cobalt, Total	mg/L	0.0000139	0.0044	0.10	0.104	0.104	0.104	0.085 to 0.115		104	70 to 130		0.268 20
AY04114	Beryllium, Total	mg/L	0.0000317	0.00132	0.10	0.0986	0.0974	0.104	0.085 to 0.115		98.6	70 to 130		1.29 20
AY04114	Selenium, Total	mg/L	0.0000243	0.0044	0.10	0.107	0.106	0.105	0.085 to 0.115		103	70 to 130		1.32 20
AY04115	Lithium, Total	mg/L	-0.000100	0.022	0.40	0.588	0.583	0.375	0.17 to 0.23		123	70 to 130		0.844 20
AY04114	Cadmium, Total	mg/L	0.00000286	0.00066	0.10	0.0955	0.0987	0.103	0.085 to 0.115		95.5	70 to 130		3.25 20
AY04114	Lead, Total	mg/L	0.00000301	0.0022	0.10	0.0952	0.0956	0.0990	0.085 to 0.115		95.2	70 to 130		0.383 20
AY04114	Arsenic, Total	mg/L	0.0000122	0.0022	0.10	0.103	0.105	0.104	0.085 to 0.115		103	70 to 130		1.75 20
AY04114	Barium, Total	mg/L	0.00000826	0.0044	0.10	0.108	0.110	0.0986	0.085 to 0.115		97.2	70 to 130		1.41 20
AY04114	Mercury, Total by CVAA	mg/L	-0.00000914	0.0005	0.004	0.00392	0.00390	0.00395	0.0034 to 0.0046		97.9	70 to 130		0.507 20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY04114

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY04115

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00821	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	0.00232	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00661	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/20/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	0.0964	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0209	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.27	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Test America, Pensacola NELAP ID: E81010  
 Lithium LCS was double spiked. Result passes. SGC 3/13/18

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY04115

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04114	Thallium, Total	mg/L	0.00000381	0.00044	0.10	0.0945	0.0955	0.102	0.085 to 0.115	94.5	70 to 130	1.07	20	
AY04114	Antimony, Total	mg/L	0.0000468	0.00132	0.10	0.0969	0.0975	0.0974	0.085 to 0.115	96.9	70 to 130	0.576	20	
AY04114	Chromium, Total	mg/L	0.0000136	0.0044	0.10	0.0937	0.0938	0.0943	0.085 to 0.115	93.7	70 to 130	0.106	20	
AY04114	Cobalt, Total	mg/L	0.0000139	0.0044	0.10	0.104	0.104	0.104	0.085 to 0.115	104	70 to 130	0.268	20	
AY04114	Arsenic, Total	mg/L	0.0000122	0.0022	0.10	0.103	0.105	0.104	0.085 to 0.115	103	70 to 130	1.75	20	
AY04114	Barium, Total	mg/L	0.00000826	0.0044	0.10	0.108	0.110	0.0986	0.085 to 0.115	97.2	70 to 130	1.41	20	
AY04114	Mercury, Total by CVAA	mg/L	-0.00000914	0.0005	0.004	0.00392	0.00390	0.00395	0.0034 to 0.0046	97.9	70 to 130	0.507	20	
AY04114	Beryllium, Total	mg/L	0.0000317	0.00132	0.10	0.0986	0.0974	0.104	0.085 to 0.115	98.6	70 to 130	1.29	20	
AY04114	Selenium, Total	mg/L	0.0000243	0.0044	0.10	0.107	0.106	0.105	0.085 to 0.115	103	70 to 130	1.32	20	
AY04115	Lithium, Total	mg/L	-0.000100	0.022	0.40	0.588	0.583	0.375	0.17 to 0.23	123	70 to 130	0.844	20	
AY04114	Molybdenum, Total	mg/L	0.0000119	0.0044	0.10	0.0920	0.0920	0.0909	0.085 to 0.115	92.0	70 to 130	0.0036620	20	
AY04114	Cadmium, Total	mg/L	0.00000286	0.00066	0.10	0.0955	0.0987	0.103	0.085 to 0.115	95.5	70 to 130	3.25	20	
AY04114	Lead, Total	mg/L	0.00000301	0.0022	0.10	0.0952	0.0956	0.0990	0.085 to 0.115	95.2	70 to 130	0.383	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010  
 Lithium LCS was double spiked. Result passes. SGC 3/13/18



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY04115

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Test America, Pensacola NELAP ID: E81010  
 Lithium LCS was double spiked. Result passes. SGC 3/13/18

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY04116

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0127	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0179	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/20/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	0.0615	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.22	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY04116

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04114	Molybdenum, Total	mg/L	0.0000119	0.0044	0.10	0.0920	0.0920	0.0909	0.085 to 0.115	92.0	70 to 130	0.0036620		
AY04114	Thallium, Total	mg/L	0.00000381	0.00044	0.10	0.0945	0.0955	0.102	0.085 to 0.115	94.5	70 to 130	1.07	20	
AY04114	Antimony, Total	mg/L	0.0000468	0.00132	0.10	0.0969	0.0975	0.0974	0.085 to 0.115	96.9	70 to 130	0.576	20	
AY04114	Cadmium, Total	mg/L	0.00000286	0.00066	0.10	0.0955	0.0987	0.103	0.085 to 0.115	95.5	70 to 130	3.25	20	
AY04114	Lead, Total	mg/L	0.00000301	0.0022	0.10	0.0952	0.0956	0.0990	0.085 to 0.115	95.2	70 to 130	0.383	20	
AY04114	Chromium, Total	mg/L	0.0000136	0.0044	0.10	0.0937	0.0938	0.0943	0.085 to 0.115	93.7	70 to 130	0.106	20	
AY04114	Cobalt, Total	mg/L	0.0000139	0.0044	0.10	0.104	0.104	0.104	0.085 to 0.115	104	70 to 130	0.268	20	
AY04114	Beryllium, Total	mg/L	0.0000317	0.00132	0.10	0.0986	0.0974	0.104	0.085 to 0.115	98.6	70 to 130	1.29	20	
AY04114	Selenium, Total	mg/L	0.0000243	0.0044	0.10	0.107	0.106	0.105	0.085 to 0.115	103	70 to 130	1.32	20	
AY04115	Lithium, Total	mg/L	-0.000100	0.022	0.40	0.588	0.583	0.375	0.17 to 0.23	123	70 to 130	0.844	20	
AY04114	Arsenic, Total	mg/L	0.0000122	0.0022	0.10	0.103	0.105	0.104	0.085 to 0.115	103	70 to 130	1.75	20	
AY04114	Barium, Total	mg/L	0.00000826	0.0044	0.10	0.108	0.110	0.0986	0.085 to 0.115	97.2	70 to 130	1.41	20	
AY04114	Mercury, Total by CVAA	mg/L	-0.00000914	0.0005	0.004	0.00392	0.00390	0.00395	0.0034 to 0.0046	97.9	70 to 130	0.507	20	

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Laboratory certification ID: E571114

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY04116

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

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CC:

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

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY04117

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00937	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	0.00180	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0620	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/20/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	J 0.0233	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00211	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.14	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY04117

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04114	Molybdenum, Total	mg/L	0.0000119	0.0044	0.10	0.0920	0.0920	0.0909	0.085 to 0.115	92.0	70 to 130	0.0036620		
AY04114	Thallium, Total	mg/L	0.00000381	0.00044	0.10	0.0945	0.0955	0.102	0.085 to 0.115	94.5	70 to 130	1.07	20	
AY04114	Antimony, Total	mg/L	0.0000468	0.00132	0.10	0.0969	0.0975	0.0974	0.085 to 0.115	96.9	70 to 130	0.576	20	
AY04114	Arsenic, Total	mg/L	0.0000122	0.0022	0.10	0.103	0.105	0.104	0.085 to 0.115	103	70 to 130	1.75	20	
AY04114	Barium, Total	mg/L	0.00000826	0.0044	0.10	0.108	0.110	0.0986	0.085 to 0.115	97.2	70 to 130	1.41	20	
AY04114	Mercury, Total by CVAA	mg/L	-0.00000914	0.0005	0.004	0.00392	0.00390	0.00395	0.0034 to 0.0046	97.9	70 to 130	0.507	20	
AY04114	Cadmium, Total	mg/L	0.00000286	0.00066	0.10	0.0955	0.0987	0.103	0.085 to 0.115	95.5	70 to 130	3.25	20	
AY04114	Lead, Total	mg/L	0.00000301	0.0022	0.10	0.0952	0.0956	0.0990	0.085 to 0.115	95.2	70 to 130	0.383	20	
AY04114	Chromium, Total	mg/L	0.0000136	0.0044	0.10	0.0937	0.0938	0.0943	0.085 to 0.115	93.7	70 to 130	0.106	20	
AY04114	Cobalt, Total	mg/L	0.0000139	0.0044	0.10	0.104	0.104	0.104	0.085 to 0.115	104	70 to 130	0.268	20	
AY04114	Beryllium, Total	mg/L	0.0000317	0.00132	0.10	0.0986	0.0974	0.104	0.085 to 0.115	98.6	70 to 130	1.29	20	
AY04114	Selenium, Total	mg/L	0.0000243	0.0044	0.10	0.107	0.106	0.105	0.085 to 0.115	103	70 to 130	1.32	20	
AY04115	Lithium, Total	mg/L	-0.000100	0.022	0.40	0.588	0.583	0.375	0.17 to 0.23	123	70 to 130	0.844	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY04117

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY04118

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0106	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0101	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	J 0.0249	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00340	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.24	mg/L

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY04118

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec Limit	
			MB	Limit					Limit	Rec	Limit	Prec		
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115		97.0	70 to 130	0.624	20
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115		94.8	70 to 130	1.15	20
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115		95.9	70 to 130	2.05	20
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115		101	70 to 130	1.78	20
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115		93.6	70 to 130	1.50	20
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115		108	70 to 130	0.465	20
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23		91.8	70 to 130	1.44	20
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046		98.4	70 to 130	0.0254	20
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115		103	70 to 130	0.466	20
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115		103	70 to 130	0.916	20
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115		94.4	70 to 130	5.29	20
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115		101	70 to 130	6.33	20
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115		93.1	70 to 130	0.0347	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY04118

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Rec	Prec	Prec
								Duplicate	LCS			Limit	Limit		Limit

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY04119

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	J 0.00139	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0115	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0104	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	J 0.0325	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.25	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY04119

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115	94.4	70 to 130	5.29	20	
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115	101	70 to 130	6.33	20	
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115	93.1	70 to 130	0.0347	20	
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115	101	70 to 130	1.78	20	
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115	93.6	70 to 130	1.50	20	
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.465	20	
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23	91.8	70 to 130	1.44	20	
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046	98.4	70 to 130	0.0254	20	
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115	94.8	70 to 130	1.15	20	
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115	95.9	70 to 130	2.05	20	
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115	103	70 to 130	0.466	20	
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.916	20	
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115	97.0	70 to 130	0.624	20	

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY04119

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AY04120

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	J 0.00132	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0118	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0102	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	J 0.0325	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.25	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AY04120

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			Limit	MB					Limit	Rec	Limit	Prec		
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115	97.0	70 to 130	0.624	20	
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115	94.8	70 to 130	1.15	20	
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115	95.9	70 to 130	2.05	20	
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115	101	70 to 130	1.78	20	
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115	93.6	70 to 130	1.50	20	
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115	103	70 to 130	0.466	20	
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.916	20	
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115	94.4	70 to 130	5.29	20	
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115	101	70 to 130	6.33	20	
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115	93.1	70 to 130	0.0347	20	
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.465	20	
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23	91.8	70 to 130	1.44	20	
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046	98.4	70 to 130	0.0254	20	

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AY04120

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:



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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY04121

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/26/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY04121

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			Limit	MB					Limit	Rec	Limit	Prec		
AY04121	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0970	0.0976	0.0999	0.085 to 0.115	97.0	70 to 130	0.624	20	
AY04121	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.101	0.0995	0.0993	0.085 to 0.115	101	70 to 130	1.78	20	
AY04121	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0936	0.0950	0.102	0.085 to 0.115	93.6	70 to 130	1.50	20	
AY04121	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0944	0.0995	0.0966	0.085 to 0.115	94.4	70 to 130	5.29	20	
AY04121	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.101	0.107	0.102	0.085 to 0.115	101	70 to 130	6.33	20	
AY04121	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0931	0.0931	0.0940	0.085 to 0.115	93.1	70 to 130	0.0347	20	
AY04121	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.103	0.102	0.104	0.085 to 0.115	103	70 to 130	0.466	20	
AY04121	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.916	20	
AY04121	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0948	0.0959	0.0991	0.085 to 0.115	94.8	70 to 130	1.15	20	
AY04121	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0959	0.0939	0.0947	0.085 to 0.115	95.9	70 to 130	2.05	20	
AY04121	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.465	20	
AY04121	Lithium, Total	mg/L	-0.0000597	0.022	0.20	0.184	0.181	0.189	0.17 to 0.23	91.8	70 to 130	1.44	20	
AY04121	Mercury, Total by CVAA	mg/L	0.00000528	0.0005	0.004	0.00394	0.00394	0.00385	0.0034 to 0.0046	98.4	70 to 130	0.0254	20	

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 13-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY04121

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS					

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY04122

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0121	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0685	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	0.0637	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.35	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY04122

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY04122

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY04123

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	J 0.00275	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0137	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00965	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	J 0.0168	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.17	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY04123

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY04123

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY04124

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0161	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00286	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	0.0550	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.30	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY04124

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY04124

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY04125

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0100	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0741	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	0.0569	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.28	mg/L

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY04125

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY04125

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY04126

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0154	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	0.256	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.12	mg/L

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY04126

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY04126

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS		Rec		Prec	

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

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY04127

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	J 0.00171	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0139	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	0.233	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.10	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY04127

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY04127

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY04128

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	J 0.00337	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0203	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.199	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	J 0.0335	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.15	mg/L

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY04128

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY04128

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS			Rec		Prec	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:



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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY04129

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	0.0346	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0113	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0333	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	0.104	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.12	mg/L

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY04129

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY04129

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS			Rec		Prec	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY04130

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0199	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	J 0.00235	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	0.0199	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	0.230	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	J 0.00272	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	0.23	mg/L

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY04130

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY04130

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY04131

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	DLJ	2/27/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cadmium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	2/21/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	2/28/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	2/21/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Fluoride, Total, by Test America	SGC	3/8/2018	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY04131

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY04131	Cadmium, Total	mg/L	0.00000823	0.00066	0.10	0.0962	0.0974	0.0999	0.085 to 0.115	96.2	70 to 130	1.23	20	
AY04131	Beryllium, Total	mg/L	0.0000246	0.00132	0.10	0.0962	0.0963	0.102	0.085 to 0.115	96.2	70 to 130	0.154	20	
AY04131	Arsenic, Total	mg/L	0.0000130	0.0022	0.10	0.101	0.100	0.104	0.085 to 0.115	101	70 to 130	0.949	20	
AY04131	Lead, Total	mg/L	-0.00000133	0.0022	0.10	0.0943	0.0946	0.0991	0.085 to 0.115	94.3	70 to 130	0.337	20	
AY04131	Barium, Total	mg/L	-0.00000103	0.0044	0.10	0.0996	0.0948	0.0966	0.085 to 0.115	99.6	70 to 130	4.87	20	
AY04131	Mercury, Total by CVAA	mg/L	0.00000346	0.0005	0.004	0.00395	0.00387	0.00394	0.0034 to 0.0046	98.7	70 to 130	1.90	20	
AY04131	Thallium, Total	mg/L	0.00000457	0.00044	0.10	0.0930	0.0934	0.102	0.085 to 0.115	93.0	70 to 130	0.447	20	
AY04131	Chromium, Total	mg/L	0.00000524	0.0044	0.10	0.0904	0.0905	0.0940	0.085 to 0.115	90.4	70 to 130	0.136	20	
AY04131	Lithium, Total	mg/L	-0.000284	0.022	0.20	0.189	0.189	0.189	0.17 to 0.23	94.7	70 to 130	0.205	20	
AY04131	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.0952	0.0946	0.0947	0.085 to 0.115	95.2	70 to 130	0.629	20	
AY04131	Antimony, Total	mg/L	0.0000593	0.00132	0.10	0.100	0.0998	0.0993	0.085 to 0.115	100	70 to 130	0.439	20	
AY04131	Cobalt, Total	mg/L	0.0000180	0.0044	0.10	0.106	0.106	0.107	0.085 to 0.115	106	70 to 130	0.243	20	
AY04131	Selenium, Total	mg/L	0.0000352	0.0044	0.10	0.105	0.104	0.104	0.085 to 0.115	105	70 to 130	0.792	20	

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

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

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

Laboratory certification ID: E571114

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 15-Feb-18  
 Customer ID:  
 Delivery Date: 16-Feb-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY04131

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS					

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

## Definitions



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

Qualifier	Description
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
E	Estimated reported value exceeded calibration range.
J	Reported value is an estimate because concentration is less than reporting limit.
N	Organic constituents tentatively identified. Confirmation is needed.
R	Matrix spike recovery is out of range.
U	Compound was analyzed, but not detected.
P	Precision is out of range.
C	Analyte was verified by re-analysis.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
L	Check standard is outside of the required specification limit.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
F	Water Field Group (WFG) qualifier; see comments for more information



**Chain of Custody**  
**Groundwater**  
 APC General Testing Laboratory  
 General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 02/15/2018 07:00

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

Analysis Requested	Bottle 1 (500mL): Metals, Bottle 2 (250mL): Hg, Bottle 3 (250mL): Anions
Comments	Fluoride outsourced to Test America, Pensacola for analysis. There is no temperature preservation requirement for the requested analyses.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	02/14/2018	10:55	3	Groundwater		AY04108
MW-6	02/14/2018	12:14	3	Groundwater		AY04109
MW-7	02/14/2018	13:14	3	Groundwater		AY04110
MW-8	02/14/2018	14:30	3	Groundwater		AY04111
FB-2	02/14/2018	10:37	3	Field Blank		AY04112
MW-6DUP	02/14/2018	12:14	3	Sample Duplicate		AY04113

Relinquished By	Received By	Date/Time
	Sarah Copeland <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o.ou, email=sgcopela@southernco.com, c=US Date: 2018.02.15 12:34:12 -0600</small>	02/15/2018 12:34

SmarTroll ID	5141-26150-1-1
Turbidity ID	4677-23343-4-2

All metals and radiological bottles have pH < 2

Cooler Temp	NA
Thermometer ID	NA
pH Strip ID	5881-30151-10-5



# Chain of Custody Groundwater

APC General Testing Laboratory  
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 02/15/2018 16:30

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Ben Rothschadl	Location	Gorgas Landfill
Analysis Requested	Bottle 1 (500mL): Metals, Bottle 2 (250mL): Hg, Bottle 3 (250mL): Anions		
Comments	Fluoride outsourced to Test America, Pensacola for analysis. There is no temperature preservation requirement for the analyses requested.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-4	02/13/2018	10:14	3	Groundwater		AY04114
MW-3	02/13/2018	11:15	3	Groundwater		AY04115
MW-2	02/13/2018	12:22	3	Groundwater		AY04116
MW-1	02/13/2018	13:19	3	Groundwater		AY04117
MW-13	02/13/2018	14:33	3	Groundwater		AY04118
MW-14	02/13/2018	15:30	3	Groundwater		AY04119
MW-14 DUP	02/13/2018	15:30	3	Sample Duplicate		AY04120
FB-1	02/13/2018	16:00	3	Field Blank		AY04121
MW-15	02/14/2018	09:30	3	Groundwater		AY04122
MW-16	02/14/2018	10:42	3	Groundwater		AY04123
MW-18	02/14/2018	12:08	3	Groundwater		AY04124
MW-19	02/14/2018	13:41	3	Groundwater		AY04125
MW-20	02/14/2018	14:36	3	Groundwater		AY04126
MW-11	02/14/2018	15:52	3	Groundwater		AY04127
MW-17R	02/15/2018	10:03	3	Groundwater		AY04128
MW-12	02/15/2018	11:22	3	Groundwater		AY04129
MW-10	02/15/2018	13:25	3	Groundwater		AY04130
EB-1	02/15/2018	14:15	3	Equipment Blank		AY04131

Relinquished By	Received By	Date/Time
	<b>Sarah Copeland</b> <small>Digitally signed by Sarah Copeland            DN: cn=Sarah Copeland, o.ou,            email=sgcopela@southerncco.com, c=US            Date: 2018.02.15 16:55:53 -0600</small>	<span style="border: 1px solid black; padding: 2px;">02/15/2018 16:55</span>

SmarTroll ID	6496-34170-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	3901-20009-2-1	Cooler Temp	NA
		Thermometer ID	NA
		pH Strip ID	5881-30151-10-5



**Chain of Custody**  
**Groundwater**  
 APC General Testing Laboratory  
 General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 02/15/2018 07:00

Requested Complete Date	<input type="text" value="Routine"/>	Results To	<input type="text" value="Dustin Brooks, Greg Dyer"/>
Site Representative	<input type="text" value="Che George"/>	Requested By	<input type="text" value="Greg Dyer"/>
Collector	<input type="text" value="Anthony Goggins"/>	Location	<input type="text" value="Gorgas Landfill"/>
Analysis Requested	<input type="text" value="Bottle 1 (1L): Radiological"/>		
Comments	<input type="text" value="Radium Duplicate collected at MW-7. There is no temperature preservation requirement for Radium."/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	02/14/2018	10:55	1	Groundwater		AY04132
MW-6	02/14/2018	12:14	1	Groundwater		AY04133
MW-6DUP	02/14/2018	12:14	1	Sample Duplicate		AY04134
MW-7	02/14/2018	13:14	3	Groundwater		AY04135
MW-8	02/14/2018	14:30	1	Groundwater		AY04136
FB-2	02/14/2018	10:37	1	Field Blank		AY04137

Relinquished By	Received By	Date/Time
	<b>Sarah Copeland</b> <small>Digitally signed by Sarah Copeland        DN: cn=Sarah Copeland, o.ou,        email=sgcopela@southernco.com, c=US        Date: 2018.02.15 10:42:29 -0600</small>	02/15/2018 10:42

SmarTroll ID <input type="text" value="5141-26150-1-1"/>	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID <input type="text" value="4677-23343-4-2"/>	Cooler Temp <input type="text" value="NA"/>
	Thermometer ID <input type="text" value="NA"/>
	pH Strip ID <input type="text" value="5881-30151-10-5"/>



**Chain of Custody**  
**Groundwater**  
 APC General Testing Laboratory  
 General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 02/15/2018 16:30

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Ben Rothschadl	Location	Gorgas Landfill
Analysis Requested	Bottle 1 (1L): Radiological		
Comments	Radium Duplicate collected at MW-16. There is no temperature preservation requirement for Radium.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-4	02/13/2018	10:14	1	Groundwater		AY04138
MW-3	02/13/2018	11:15	1	Groundwater		AY04139
MW-2	02/13/2018	12:22	1	Groundwater		AY04140
MW-1	02/13/2018	13:19	1	Groundwater		AY04141
MW-13	02/13/2018	14:33	1	Groundwater		AY04142
MW-14	02/13/2018	15:30	1	Groundwater		AY04143
MW-14 DUP	02/13/2018	15:30	1	Sample Duplicate		AY04144
FB-1	02/13/2018	16:00	1	Field Blank		AY04145
MW-15	02/14/2018	09:30	1	Groundwater		AY04146
MW-16	02/14/2018	10:42	3	Groundwater		AY04147
MW-18	02/14/2018	12:08	1	Groundwater		AY04148
MW-19	02/14/2018	13:41	1	Groundwater		AY04149
MW-20	02/14/2018	14:36	1	Groundwater		AY04150
MW-11	02/14/2018	15:52	1	Groundwater		AY04151
MW-17R	02/15/2018	10:03	1	Groundwater		AY04152
MW-12	02/15/2018	11:22	1	Groundwater		AY04153
MW-10	02/15/2018	13:25	1	Groundwater		AY04154
EB-1	02/15/2018	14:15	1	Equipment Blank		AY04155

Relinquished By	Received By	Date/Time
	Sarah Copeland <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o.ou, email=sgcopela@southernmco.com, c=US Date: 2018.02.15 16:54:27 -0600</small>	02/15/2018 16:54

SmarTroll ID	6496-34170-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20009-2-1	Cooler Temp
		NA
		Thermometer ID
		NA
		pH Strip ID
		5881-30151-10-5

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-149784-1

TestAmerica Sample Delivery Group: Gorgas Landfill 1137

Client Project/Site: CCR Plant Gorgas

For:

Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

2/28/2018 10:14:28 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

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

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

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

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

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# Detection Summary

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

## Client Sample ID: AY04108 MW-5

## Lab Sample ID: 400-149784-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.33		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04109 MW-6

## Lab Sample ID: 400-149784-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04110 MW-7

## Lab Sample ID: 400-149784-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.18		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04111 MW-8

## Lab Sample ID: 400-149784-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.21		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04112 FB-2

## Lab Sample ID: 400-149784-5

No Detections.

## Client Sample ID: AY04113 MW-6 DUP

## Lab Sample ID: 400-149784-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04117 MW-1

## Lab Sample ID: 400-149784-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.14		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04116 MW-2

## Lab Sample ID: 400-149784-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04115 MW-3

## Lab Sample ID: 400-149784-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.27		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04114 MW-4

## Lab Sample ID: 400-149784-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.38		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04118 MW-13

## Lab Sample ID: 400-149784-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.24		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

## Client Sample ID: AY04119 MW-14

## Lab Sample ID: 400-149784-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04120 MW-14 DUP

## Lab Sample ID: 400-149784-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04121 FB-1

## Lab Sample ID: 400-149784-14

No Detections.

## Client Sample ID: AY04122 MW-15

## Lab Sample ID: 400-149784-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.35		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04123 MW-16

## Lab Sample ID: 400-149784-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.17		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04124 MW-18

## Lab Sample ID: 400-149784-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.30		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04125 MW-19

## Lab Sample ID: 400-149784-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.28		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04126 MW-20

## Lab Sample ID: 400-149784-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.12		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04127 MW-11

## Lab Sample ID: 400-149784-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04128 MW-17R

## Lab Sample ID: 400-149784-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.15		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

## Client Sample ID: AY04129 MW-12

## Lab Sample ID: 400-149784-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.12		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

## Detection Summary

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04130 MW-10**

**Lab Sample ID: 400-149784-23**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.23		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

**Client Sample ID: AY04131 EB-1**

**Lab Sample ID: 400-149784-24**

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

---

Method	Method Description	Protocol	Laboratory
SM 4500 F C	Fluoride	SM	TAL PEN

---

**Protocol References:**

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

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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# Sample Summary

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-149784-1	AY04108 MW-5	Water	02/14/18 10:55	02/19/18 16:35
400-149784-2	AY04109 MW-6	Water	02/14/18 12:14	02/19/18 16:35
400-149784-3	AY04110 MW-7	Water	02/14/18 13:14	02/19/18 16:35
400-149784-4	AY04111 MW-8	Water	02/14/18 14:30	02/19/18 16:35
400-149784-5	AY04112 FB-2	Water	02/14/18 10:37	02/19/18 16:35
400-149784-6	AY04113 MW-6 DUP	Water	02/14/18 12:14	02/19/18 16:35
400-149784-7	AY04117 MW-1	Water	02/13/18 13:19	02/19/18 16:35
400-149784-8	AY04116 MW-2	Water	02/13/18 12:22	02/19/18 16:35
400-149784-9	AY04115 MW-3	Water	02/13/18 11:15	02/19/18 16:35
400-149784-10	AY04114 MW-4	Water	02/13/18 10:14	02/19/18 16:35
400-149784-11	AY04118 MW-13	Water	02/13/18 14:33	02/19/18 16:35
400-149784-12	AY04119 MW-14	Water	02/13/18 15:30	02/19/18 16:35
400-149784-13	AY04120 MW-14 DUP	Water	02/13/18 15:30	02/19/18 16:35
400-149784-14	AY04121 FB-1	Water	02/13/18 16:00	02/19/18 16:35
400-149784-15	AY04122 MW-15	Water	02/14/18 09:30	02/19/18 16:35
400-149784-16	AY04123 MW-16	Water	02/14/18 10:42	02/19/18 16:35
400-149784-17	AY04124 MW-18	Water	02/14/18 12:08	02/19/18 16:35
400-149784-18	AY04125 MW-19	Water	02/14/18 13:41	02/19/18 16:35
400-149784-19	AY04126 MW-20	Water	02/14/18 14:36	02/19/18 16:35
400-149784-20	AY04127 MW-11	Water	02/14/18 15:52	02/19/18 16:35
400-149784-21	AY04128 MW-17R	Water	02/15/18 10:03	02/19/18 16:35
400-149784-22	AY04129 MW-12	Water	02/15/18 11:22	02/19/18 16:35
400-149784-23	AY04130 MW-10	Water	02/15/18 13:25	02/19/18 16:35
400-149784-24	AY04131 EB-1	Water	02/15/18 14:15	02/19/18 16:35

# Client Sample Results

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

TestAmerica Job ID: 400-149784-1  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04108 MW-5**

**Lab Sample ID: 400-149784-1**

Date Collected: 02/14/18 10:55

Matrix: Water

Date Received: 02/19/18 16:35

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.33		0.10	0.032	mg/L			02/22/18 10:00	1

**Client Sample ID: AY04109 MW-6**

**Lab Sample ID: 400-149784-2**

Date Collected: 02/14/18 12:14

Matrix: Water

Date Received: 02/19/18 16:35

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.13		0.10	0.032	mg/L			02/22/18 10:04	1

**Client Sample ID: AY04110 MW-7**

**Lab Sample ID: 400-149784-3**

Date Collected: 02/14/18 13:14

Matrix: Water

Date Received: 02/19/18 16:35

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.18		0.10	0.032	mg/L			02/22/18 10:06	1

**Client Sample ID: AY04111 MW-8**

**Lab Sample ID: 400-149784-4**

Date Collected: 02/14/18 14:30

Matrix: Water

Date Received: 02/19/18 16:35

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.21		0.10	0.032	mg/L			02/22/18 10:08	1

**Client Sample ID: AY04112 FB-2**

**Lab Sample ID: 400-149784-5**

Date Collected: 02/14/18 10:37

Matrix: Water

Date Received: 02/19/18 16:35

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			02/22/18 10:12	1

**Client Sample ID: AY04113 MW-6 DUP**

**Lab Sample ID: 400-149784-6**

Date Collected: 02/14/18 12:14

Matrix: Water

Date Received: 02/19/18 16:35

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.13		0.10	0.032	mg/L			02/22/18 10:15	1

**Client Sample ID: AY04117 MW-1**

**Lab Sample ID: 400-149784-7**

Date Collected: 02/13/18 13:19

Matrix: Water

Date Received: 02/19/18 16:35

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.14		0.10	0.032	mg/L			02/21/18 14:27	1

# Client Sample Results

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04116 MW-2**

Date Collected: 02/13/18 12:22

Date Received: 02/19/18 16:35

**Lab Sample ID: 400-149784-8**

Matrix: Water

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.22		0.10	0.032	mg/L			02/21/18 14:29	1

**Client Sample ID: AY04115 MW-3**

Date Collected: 02/13/18 11:15

Date Received: 02/19/18 16:35

**Lab Sample ID: 400-149784-9**

Matrix: Water

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.27		0.10	0.032	mg/L			02/21/18 14:31	1

**Client Sample ID: AY04114 MW-4**

Date Collected: 02/13/18 10:14

Date Received: 02/19/18 16:35

**Lab Sample ID: 400-149784-10**

Matrix: Water

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.38		0.10	0.032	mg/L			02/21/18 13:33	1

**Client Sample ID: AY04118 MW-13**

Date Collected: 02/13/18 14:33

Date Received: 02/19/18 16:35

**Lab Sample ID: 400-149784-11**

Matrix: Water

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.24		0.10	0.032	mg/L			02/22/18 10:17	1

**Client Sample ID: AY04119 MW-14**

Date Collected: 02/13/18 15:30

Date Received: 02/19/18 16:35

**Lab Sample ID: 400-149784-12**

Matrix: Water

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.25		0.10	0.032	mg/L			02/22/18 10:25	1

**Client Sample ID: AY04120 MW-14 DUP**

Date Collected: 02/13/18 15:30

Date Received: 02/19/18 16:35

**Lab Sample ID: 400-149784-13**

Matrix: Water

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.25		0.10	0.032	mg/L			02/22/18 10:31	1

**Client Sample ID: AY04121 FB-1**

Date Collected: 02/13/18 16:00

Date Received: 02/19/18 16:35

**Lab Sample ID: 400-149784-14**

Matrix: Water

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			02/22/18 10:35	1

TestAmerica Pensacola

# Client Sample Results

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04122 MW-15**

**Lab Sample ID: 400-149784-15**

Date Collected: 02/14/18 09:30

Matrix: Water

Date Received: 02/19/18 16:35

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.35		0.10	0.032	mg/L			02/22/18 10:37	1

**Client Sample ID: AY04123 MW-16**

**Lab Sample ID: 400-149784-16**

Date Collected: 02/14/18 10:42

Matrix: Water

Date Received: 02/19/18 16:35

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.17		0.10	0.032	mg/L			02/22/18 10:39	1

**Client Sample ID: AY04124 MW-18**

**Lab Sample ID: 400-149784-17**

Date Collected: 02/14/18 12:08

Matrix: Water

Date Received: 02/19/18 16:35

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.30		0.10	0.032	mg/L			02/22/18 10:42	1

**Client Sample ID: AY04125 MW-19**

**Lab Sample ID: 400-149784-18**

Date Collected: 02/14/18 13:41

Matrix: Water

Date Received: 02/19/18 16:35

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.28		0.10	0.032	mg/L			02/22/18 10:44	1

**Client Sample ID: AY04126 MW-20**

**Lab Sample ID: 400-149784-19**

Date Collected: 02/14/18 14:36

Matrix: Water

Date Received: 02/19/18 16:35

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.12		0.10	0.032	mg/L			02/22/18 10:46	1

**Client Sample ID: AY04127 MW-11**

**Lab Sample ID: 400-149784-20**

Date Collected: 02/14/18 15:52

Matrix: Water

Date Received: 02/19/18 16:35

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.10		0.10	0.032	mg/L			02/22/18 10:49	1

**Client Sample ID: AY04128 MW-17R**

**Lab Sample ID: 400-149784-21**

Date Collected: 02/15/18 10:03

Matrix: Water

Date Received: 02/19/18 16:35

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.15		0.10	0.032	mg/L			02/22/18 13:25	1

TestAmerica Pensacola



# Client Sample Results

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04129 MW-12**

**Date Collected: 02/15/18 11:22**

**Date Received: 02/19/18 16:35**

**Lab Sample ID: 400-149784-22**

**Matrix: Water**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.12		0.10	0.032	mg/L			02/22/18 13:32	1

**Client Sample ID: AY04130 MW-10**

**Date Collected: 02/15/18 13:25**

**Date Received: 02/19/18 16:35**

**Lab Sample ID: 400-149784-23**

**Matrix: Water**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.23		0.10	0.032	mg/L			02/22/18 13:35	1

**Client Sample ID: AY04131 EB-1**

**Date Collected: 02/15/18 14:15**

**Date Received: 02/19/18 16:35**

**Lab Sample ID: 400-149784-24**

**Matrix: Water**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			02/22/18 09:53	1

## Definitions/Glossary

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

### Glossary

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

# Lab Chronicle

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04108 MW-5**  
**Date Collected: 02/14/18 10:55**  
**Date Received: 02/19/18 16:35**

**Lab Sample ID: 400-149784-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:00	BAB	TAL PEN

**Client Sample ID: AY04109 MW-6**  
**Date Collected: 02/14/18 12:14**  
**Date Received: 02/19/18 16:35**

**Lab Sample ID: 400-149784-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:04	BAB	TAL PEN

**Client Sample ID: AY04110 MW-7**  
**Date Collected: 02/14/18 13:14**  
**Date Received: 02/19/18 16:35**

**Lab Sample ID: 400-149784-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:06	BAB	TAL PEN

**Client Sample ID: AY04111 MW-8**  
**Date Collected: 02/14/18 14:30**  
**Date Received: 02/19/18 16:35**

**Lab Sample ID: 400-149784-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:08	BAB	TAL PEN

**Client Sample ID: AY04112 FB-2**  
**Date Collected: 02/14/18 10:37**  
**Date Received: 02/19/18 16:35**

**Lab Sample ID: 400-149784-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:12	BAB	TAL PEN

**Client Sample ID: AY04113 MW-6 DUP**  
**Date Collected: 02/14/18 12:14**  
**Date Received: 02/19/18 16:35**

**Lab Sample ID: 400-149784-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:15	BAB	TAL PEN

# Lab Chronicle

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04117 MW-1**

**Lab Sample ID: 400-149784-7**

**Date Collected: 02/13/18 13:19**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387878	02/21/18 14:27	BAB	TAL PEN

**Client Sample ID: AY04116 MW-2**

**Lab Sample ID: 400-149784-8**

**Date Collected: 02/13/18 12:22**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387878	02/21/18 14:29	BAB	TAL PEN

**Client Sample ID: AY04115 MW-3**

**Lab Sample ID: 400-149784-9**

**Date Collected: 02/13/18 11:15**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387878	02/21/18 14:31	BAB	TAL PEN

**Client Sample ID: AY04114 MW-4**

**Lab Sample ID: 400-149784-10**

**Date Collected: 02/13/18 10:14**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387878	02/21/18 13:33	BAB	TAL PEN

**Client Sample ID: AY04118 MW-13**

**Lab Sample ID: 400-149784-11**

**Date Collected: 02/13/18 14:33**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:17	BAB	TAL PEN

**Client Sample ID: AY04119 MW-14**

**Lab Sample ID: 400-149784-12**

**Date Collected: 02/13/18 15:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:25	BAB	TAL PEN

# Lab Chronicle

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04120 MW-14 DUP**

**Lab Sample ID: 400-149784-13**

**Date Collected: 02/13/18 15:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:31	BAB	TAL PEN

**Client Sample ID: AY04121 FB-1**

**Lab Sample ID: 400-149784-14**

**Date Collected: 02/13/18 16:00**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:35	BAB	TAL PEN

**Client Sample ID: AY04122 MW-15**

**Lab Sample ID: 400-149784-15**

**Date Collected: 02/14/18 09:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:37	BAB	TAL PEN

**Client Sample ID: AY04123 MW-16**

**Lab Sample ID: 400-149784-16**

**Date Collected: 02/14/18 10:42**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:39	BAB	TAL PEN

**Client Sample ID: AY04124 MW-18**

**Lab Sample ID: 400-149784-17**

**Date Collected: 02/14/18 12:08**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:42	BAB	TAL PEN

**Client Sample ID: AY04125 MW-19**

**Lab Sample ID: 400-149784-18**

**Date Collected: 02/14/18 13:41**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:44	BAB	TAL PEN

# Lab Chronicle

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04126 MW-20**

**Lab Sample ID: 400-149784-19**

**Date Collected: 02/14/18 14:36**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:46	BAB	TAL PEN

**Client Sample ID: AY04127 MW-11**

**Lab Sample ID: 400-149784-20**

**Date Collected: 02/14/18 15:52**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 10:49	BAB	TAL PEN

**Client Sample ID: AY04128 MW-17R**

**Lab Sample ID: 400-149784-21**

**Date Collected: 02/15/18 10:03**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387556	02/22/18 13:25	BAB	TAL PEN

**Client Sample ID: AY04129 MW-12**

**Lab Sample ID: 400-149784-22**

**Date Collected: 02/15/18 11:22**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387556	02/22/18 13:32	BAB	TAL PEN

**Client Sample ID: AY04130 MW-10**

**Lab Sample ID: 400-149784-23**

**Date Collected: 02/15/18 13:25**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387556	02/22/18 13:35	BAB	TAL PEN

**Client Sample ID: AY04131 EB-1**

**Lab Sample ID: 400-149784-24**

**Date Collected: 02/15/18 14:15**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	387519	02/22/18 09:53	BAB	TAL PEN

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# QC Association Summary

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

TestAmerica Job ID: 400-149784-1  
 SDG: Gorgas Landfill 1137

## General Chemistry

### Analysis Batch: 387519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149784-1	AY04108 MW-5	Total/NA	Water	SM 4500 F C	
400-149784-2	AY04109 MW-6	Total/NA	Water	SM 4500 F C	
400-149784-3	AY04110 MW-7	Total/NA	Water	SM 4500 F C	
400-149784-4	AY04111 MW-8	Total/NA	Water	SM 4500 F C	
400-149784-5	AY04112 FB-2	Total/NA	Water	SM 4500 F C	
400-149784-6	AY04113 MW-6 DUP	Total/NA	Water	SM 4500 F C	
400-149784-11	AY04118 MW-13	Total/NA	Water	SM 4500 F C	
400-149784-12	AY04119 MW-14	Total/NA	Water	SM 4500 F C	
400-149784-13	AY04120 MW-14 DUP	Total/NA	Water	SM 4500 F C	
400-149784-14	AY04121 FB-1	Total/NA	Water	SM 4500 F C	
400-149784-15	AY04122 MW-15	Total/NA	Water	SM 4500 F C	
400-149784-16	AY04123 MW-16	Total/NA	Water	SM 4500 F C	
400-149784-17	AY04124 MW-18	Total/NA	Water	SM 4500 F C	
400-149784-18	AY04125 MW-19	Total/NA	Water	SM 4500 F C	
400-149784-19	AY04126 MW-20	Total/NA	Water	SM 4500 F C	
400-149784-20	AY04127 MW-11	Total/NA	Water	SM 4500 F C	
400-149784-24	AY04131 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-387519/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-387519/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-149784-24 MS	AY04131 EB-1	Total/NA	Water	SM 4500 F C	
400-149784-24 MSD	AY04131 EB-1	Total/NA	Water	SM 4500 F C	
400-149784-12 DU	AY04119 MW-14	Total/NA	Water	SM 4500 F C	

### Analysis Batch: 387556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149784-21	AY04128 MW-17R	Total/NA	Water	SM 4500 F C	
400-149784-22	AY04129 MW-12	Total/NA	Water	SM 4500 F C	
400-149784-23	AY04130 MW-10	Total/NA	Water	SM 4500 F C	
MB 400-387556/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-387556/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-149784-21 MS	AY04128 MW-17R	Total/NA	Water	SM 4500 F C	
400-149784-21 MSD	AY04128 MW-17R	Total/NA	Water	SM 4500 F C	

### Analysis Batch: 387671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-387671/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-387671/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-149784-6 MS	AY04113 MW-6 DUP	Total/NA	Water	SM 4500 F C	
400-149784-6 MSD	AY04113 MW-6 DUP	Total/NA	Water	SM 4500 F C	

### Analysis Batch: 387878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149784-7	AY04117 MW-1	Total/NA	Water	SM 4500 F C	
400-149784-8	AY04116 MW-2	Total/NA	Water	SM 4500 F C	
400-149784-9	AY04115 MW-3	Total/NA	Water	SM 4500 F C	
400-149784-10	AY04114 MW-4	Total/NA	Water	SM 4500 F C	
MB 400-387878/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-387878/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-149784-10 MS	AY04114 MW-4	Total/NA	Water	SM 4500 F C	
400-149784-10 MSD	AY04114 MW-4	Total/NA	Water	SM 4500 F C	
400-149783-A-2 DU	Duplicate	Total/NA	Water	SM 4500 F C	

TestAmerica Pensacola

# QC Association Summary

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

TestAmerica Job ID: 400-149784-1  
SDG: Gorgas Landfill 1137

## Analysis Batch: 387885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-387885/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-387885/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-149784-14 MS	AY04121 FB-1	Total/NA	Water	SM 4500 F C	
400-149784-14 MSD	AY04121 FB-1	Total/NA	Water	SM 4500 F C	

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# QC Sample Results

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

TestAmerica Job ID: 400-149784-1  
 SDG: Gorgas Landfill 1137

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 400-387519/3**  
**Matrix: Water**  
**Analysis Batch: 387519**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			02/22/18 09:41	1

**Lab Sample ID: LCS 400-387519/4**  
**Matrix: Water**  
**Analysis Batch: 387519**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	4.02		mg/L		101	90 - 110

**Lab Sample ID: 400-149784-24 MS**  
**Matrix: Water**  
**Analysis Batch: 387519**

**Client Sample ID: AY04131 EB-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	1.06		mg/L		106	75 - 125

**Lab Sample ID: 400-149784-24 MSD**  
**Matrix: Water**  
**Analysis Batch: 387519**

**Client Sample ID: AY04131 EB-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	1.04		mg/L		104	75 - 125	2	4

**Lab Sample ID: 400-149784-12 DU**  
**Matrix: Water**  
**Analysis Batch: 387519**

**Client Sample ID: AY04119 MW-14**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.25		0.250		mg/L		0	4

**Lab Sample ID: MB 400-387556/3**  
**Matrix: Water**  
**Analysis Batch: 387556**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			02/22/18 13:10	1

**Lab Sample ID: LCS 400-387556/4**  
**Matrix: Water**  
**Analysis Batch: 387556**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.94		mg/L		99	90 - 110

**Lab Sample ID: 400-149784-21 MS**  
**Matrix: Water**  
**Analysis Batch: 387556**

**Client Sample ID: AY04128 MW-17R**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.15		1.00	1.08		mg/L		93	75 - 125

TestAmerica Pensacola

# QC Sample Results

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

TestAmerica Job ID: 400-149784-1  
 SDG: Gorgas Landfill 1137

**Lab Sample ID: 400-149784-21 MSD**  
**Matrix: Water**  
**Analysis Batch: 387556**

**Client Sample ID: AY04128 MW-17R**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.15		1.00	1.12		mg/L		97	75 - 125	4	4

**Lab Sample ID: MB 400-387671/3**  
**Matrix: Water**  
**Analysis Batch: 387671**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			02/23/18 08:40	1

**Lab Sample ID: LCS 400-387671/4**  
**Matrix: Water**  
**Analysis Batch: 387671**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	4.02		mg/L		101	90 - 110

**Lab Sample ID: 400-149784-6 MS**  
**Matrix: Water**  
**Analysis Batch: 387671**

**Client Sample ID: AY04113 MW-6 DUP**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.14		1.00	1.12		mg/L		98	75 - 125

**Lab Sample ID: 400-149784-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 387671**

**Client Sample ID: AY04113 MW-6 DUP**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.14		1.00	1.12		mg/L		98	75 - 125	0	4

**Lab Sample ID: MB 400-387878/3**  
**Matrix: Water**  
**Analysis Batch: 387878**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			02/21/18 13:24	1

**Lab Sample ID: LCS 400-387878/4**  
**Matrix: Water**  
**Analysis Batch: 387878**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.94		mg/L		99	90 - 110

**Lab Sample ID: 400-149784-10 MS**  
**Matrix: Water**  
**Analysis Batch: 387878**

**Client Sample ID: AY04114 MW-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.38		1.00	1.28		mg/L		90	75 - 125

# QC Sample Results

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

TestAmerica Job ID: 400-149784-1  
 SDG: Gorgas Landfill 1137

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: 400-149784-10 MSD**  
**Matrix: Water**  
**Analysis Batch: 387878**

**Client Sample ID: AY04114 MW-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.38		1.00	1.28		mg/L		90	75 - 125	0	4

**Lab Sample ID: 400-149783-A-2 DU**  
**Matrix: Water**  
**Analysis Batch: 387878**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.57		0.580		mg/L		2	4

**Lab Sample ID: MB 400-387885/3**  
**Matrix: Water**  
**Analysis Batch: 387885**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			02/26/18 09:10	1

**Lab Sample ID: LCS 400-387885/4**  
**Matrix: Water**  
**Analysis Batch: 387885**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	4.02		mg/L		101	90 - 110

**Lab Sample ID: 400-149784-14 MS**  
**Matrix: Water**  
**Analysis Batch: 387885**

**Client Sample ID: AY04121 FB-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	1.06		mg/L		106	75 - 125

**Lab Sample ID: 400-149784-14 MSD**  
**Matrix: Water**  
**Analysis Batch: 387885**

**Client Sample ID: AY04121 FB-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	1.06		mg/L		106	75 - 125	0	4

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

### Chain of Custody Record



<b>Client Information</b> Client Contact: Sarah Copeland Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Calera State, Zip: AL, 35040 Phone: 205-664-6121(Tel) Email: sgcopela@southernco.com Project Name: CCR Site: Gorgas Landfill 1137		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): 400-56525-24537.1 Page: Page 1 of 2 Job #: 149784				
<b>Due Date Requested:</b> TAT Requested (days): Routine PO #: WO #: Project #: 40007143 SSO#:		<b>Analysis Requested</b> SM 4500 F_C SM 4500 CLE SM 4500 SO4 E Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> N Form M/MSD (Yes or No) <input checked="" type="checkbox"/> N Total Number of Containers:				
<b>Sample Identification</b>		<b>Special Instructions/Note:</b>				
AY04108	2/14/18	1055	G	Water	1	MW-5
AY04109	2/14/18	1214	G	Water	1	MW-6
AY04110	2/14/18	1314	G	Water	1	MW-7
AY04111	2/14/18	1430	G	Water	1	MW-8
AY04112	2/14/18	1037	G	Water	1	FB-2 (Field Blank)
AY04113	2/14/18	1214	G	Water	1	MW-6 Dup (Sample Duplicate)
AY04117	2/13/18	1319	G	Water	1	MW-1
AY04116	2/13/18	1222	G	Water	1	MW-2
AY04115	2/13/18	1115	G	Water	1	MW-3
AY04114	2/13/18	1014	G	Water	1	MW-4
AY04118	2/13/18	1433	G	Water	1	MW-13
AY04119	2/13/18	1530	G	Water	1	MW-14
AY04120	2/13/18	1530	G	Water	1	MW-14 Dup (Sample Duplicate)
AY04121	2/13/18	1600	G	Water	1	FB-1 (Field Blank)
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
<b>Empty Kit Relinquished by:</b> Relinquished by: Sarah Copeland Date/Time: 2/19/2018; 1000		<b>Method of Shipment:</b> Received by: Company APC Date/Time:				
<b>Relinquished by:</b> Relinquished by:		Received by: Company Date/Time:				
<b>Relinquished by:</b>		Received by: Company Date/Time:				
<b>Custody Seals Intact:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:				



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### Chain of Custody Record

<b>Client Information</b>		Lab PM: <b>Whitire, Cheyenne R</b>		Carrier Tracking No(s):		COC No: <b>400-56525-24537.1</b>																																																																																																																																																
Client Contact: <b>Sarah Copeland</b>		E-Mail: <b>Cheyenne.whitire@testamericainc.com</b>		Page: <b>Page 2 of 2</b>		Job #: <b>149784</b>																																																																																																																																																
Company: <b>Alabama Power General Test Laboratory</b>		Due Date Requested:		<b>Analysis Requested</b>																																																																																																																																																		
Address: <b>744 County Rd 87 GSC #8</b>		TAT Requested (days): <b>Routine</b>																																																																																																																																																				
City: <b>Calera</b>		PO #:		<table border="1"> <tr> <th>Sample Identification</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=grab)</th> <th>Matrix (Water, Solid, Gas, Soil, BT-Tissue, AAU)</th> <th>Preservation Code:</th> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> <th>SM 4500 F_C</th> <th>SM 4500 Cl_E</th> <th>SM 4500 SO4_E</th> <th>Total Number of Containers</th> <th>Special Instructions/Note:</th> </tr> <tr> <td>AY04122</td> <td>2/14/18</td> <td>0930</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>MW-15</td> </tr> <tr> <td>AY04123</td> <td>2/14/18</td> <td>1042</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>MW-16</td> </tr> <tr> <td>AY04124</td> <td>2/14/18</td> <td>1208</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>MW-18</td> </tr> <tr> <td>AY04125</td> <td>2/14/18</td> <td>1341</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>MW-19</td> </tr> <tr> <td>AY04126</td> <td>2/14/18</td> <td>1436</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>MW-20</td> </tr> <tr> <td>AY04127</td> <td>2/14/18</td> <td>1552</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>MW-11</td> </tr> <tr> <td>AY04128</td> <td>2/15/18</td> <td>1003</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>MW-17R</td> </tr> <tr> <td>AY04129</td> <td>2/15/18</td> <td>1122</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>MW-12</td> </tr> <tr> <td>AY04130</td> <td>2/15/18</td> <td>1325</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>MW-10</td> </tr> <tr> <td>AY04131</td> <td>2/15/18</td> <td>1415</td> <td>G</td> <td>Water</td> <td></td> <td>Y</td> <td>X</td> <td></td> <td></td> <td></td> <td>1</td> <td>EB-1 (Equipment Blank)</td> </tr> </table>				Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Gas, Soil, BT-Tissue, AAU)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM 4500 F_C	SM 4500 Cl_E	SM 4500 SO4_E	Total Number of Containers	Special Instructions/Note:	AY04122	2/14/18	0930	G	Water		X	X				1	MW-15	AY04123	2/14/18	1042	G	Water		X	X				1	MW-16	AY04124	2/14/18	1208	G	Water		X	X				1	MW-18	AY04125	2/14/18	1341	G	Water		X	X				1	MW-19	AY04126	2/14/18	1436	G	Water		X	X				1	MW-20	AY04127	2/14/18	1552	G	Water		X	X				1	MW-11	AY04128	2/15/18	1003	G	Water		X	X				1	MW-17R	AY04129	2/15/18	1122	G	Water		X	X				1	MW-12	AY04130	2/15/18	1325	G	Water		X	X				1	MW-10	AY04131	2/15/18	1415	G	Water		Y	X				1	EB-1 (Equipment Blank)
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)					Matrix (Water, Solid, Gas, Soil, BT-Tissue, AAU)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM 4500 F_C	SM 4500 Cl_E	SM 4500 SO4_E	Total Number of Containers	Special Instructions/Note:																																																																																																																																						
AY04122	2/14/18	0930	G	Water		X	X				1	MW-15																																																																																																																																										
AY04123	2/14/18	1042	G	Water		X	X				1	MW-16																																																																																																																																										
AY04124	2/14/18	1208	G	Water		X	X				1	MW-18																																																																																																																																										
AY04125	2/14/18	1341	G	Water		X	X				1	MW-19																																																																																																																																										
AY04126	2/14/18	1436	G	Water		X	X				1	MW-20																																																																																																																																										
AY04127	2/14/18	1552	G	Water		X	X				1	MW-11																																																																																																																																										
AY04128	2/15/18	1003	G	Water		X	X				1	MW-17R																																																																																																																																										
AY04129	2/15/18	1122	G	Water		X	X				1	MW-12																																																																																																																																										
AY04130	2/15/18	1325	G	Water		X	X				1	MW-10																																																																																																																																										
AY04131	2/15/18	1415	G	Water		Y	X				1	EB-1 (Equipment Blank)																																																																																																																																										
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																																																																																																																																																				
Empty Kit Relinquished by: <b>Sarah Copeland</b> Date: <b>2/19/2018, 1000</b>		Relinquished by: <b>Sarah Copeland</b> Date: <b>2/19/18 1635</b>																																																																																																																																																				
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Relinquished by: <b>Sarah Copeland</b> Date: <b>2/19/18 1635</b>		Relinquished by: <b>Sarah Copeland</b> Date: <b>2/19/18 1635</b>																																																																																																																																																				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:																																																																																																																																																				



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-149784-1  
SDG Number: Gorgas Landfill 1137

**Login Number: 149784**

**List Number: 1**

**Creator: Whitmire, Cheyenne R**

**List Source: TestAmerica Pensacola**

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



# Accreditation/Certification Summary

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

TestAmerica Job ID: 400-149784-1  
 SDG: Gorgas Landfill 1137

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-17 *
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

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

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-149811-2

TestAmerica Sample Delivery Group: Gorgas Landfill 1137

Client Project/Site: CCR Plant Gorgas

For:

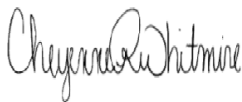
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

3/26/2018 11:31:57 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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

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

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# Case Narrative

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

TestAmerica Job ID: 400-149811-2  
SDG: Gorgas Landfill 1137

**Job ID: 400-149811-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-149811-2

#### RAD

Method(s) 9320: Radium-228 Prep Batch 160-355865: The radium-228 detection goal was not met for the following samples due to insufficient sample available for re-analysis: AY04142 MW-13 (400-149811-17) and (MB 160-355865/4-A). Analytical results are reported with the detection limit achieved.

Method(s) PrecSep\_0: Radium 228 Prep batch 160-355865: Insufficient sample volume was available to perform a sample duplicate (DUP, MS, MSD) for the following samples: AY04142 MW-13 (400-149811-17). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. Sample aliquot reduced due to insufficient sample volume.

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# Method Summary

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

TestAmerica Job ID: 400-149811-2  
SDG: Gorgas Landfill 1137

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.  
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

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



# Sample Summary

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

TestAmerica Job ID: 400-149811-2  
SDG: Gorgas Landfill 1137

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-149811-7	AY04141 MW-1	Water	02/13/18 13:19	02/19/18 16:35
400-149811-8	AY04140 MW-2	Water	02/13/18 12:22	02/19/18 16:35
400-149811-9	AY04139 MW-3	Water	02/13/18 11:15	02/19/18 16:35
400-149811-10	AY04138 MW-4	Water	02/13/18 10:14	02/19/18 16:35
400-149811-11	AY04132 MW-5	Water	02/14/18 10:55	02/19/18 16:35
400-149811-12	AY04133 MW-6	Water	02/14/18 12:14	02/19/18 16:35
400-149811-13	AY04134 MW-6 DUP	Water	02/14/18 12:14	02/19/18 16:35
400-149811-14	AY04135 MW-7	Water	02/14/18 13:14	02/19/18 16:35
400-149811-15	AY04136 MW-8	Water	02/14/18 14:30	02/19/18 16:35
400-149811-16	AY04137 FB-2	Water	02/14/18 10:37	02/19/18 16:35
400-149811-17	AY04142 MW-13	Water	02/13/18 14:33	02/19/18 16:35
400-149811-18	AY04143 MW-14	Water	02/13/18 15:30	02/19/18 16:35
400-149811-19	AY04144 MW-14 DUP	Water	02/13/18 15:30	02/19/18 16:35
400-149811-20	AY04145 FB-1	Water	02/13/18 16:00	02/19/18 16:35
400-149811-21	AY04146 MW-15	Water	02/14/18 09:30	02/19/18 16:35
400-149811-22	AY04147 MW-16	Water	02/14/18 10:42	02/19/18 16:35
400-149811-23	AY04148 MW-18	Water	02/14/18 12:08	02/19/18 16:35
400-149811-24	AY04149 MW-19	Water	02/14/18 13:41	02/19/18 16:35
400-149811-25	AY04150 MW-20	Water	02/14/18 14:36	02/19/18 16:35
400-149811-26	AY04151 MW-11	Water	02/14/18 15:52	02/19/18 16:35
400-149811-27	AY04152 MW-17R	Water	02/15/18 10:03	02/19/18 16:35
400-149811-28	AY04153 MW-12	Water	02/15/18 11:22	02/19/18 16:35
400-149811-29	AY04154 MW-10	Water	02/15/18 13:25	02/19/18 16:35
400-149811-30	AY04155 EB-1	Water	02/15/18 14:15	02/19/18 16:35

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04141 MW-1**

**Lab Sample ID: 400-149811-7**

**Date Collected: 02/13/18 13:19**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.199		0.0795	0.0815	1.00	0.0720	pCi/L	02/23/18 12:30	03/19/18 09:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					02/23/18 12:30	03/19/18 09:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.575		0.243	0.249	1.00	0.344	pCi/L	02/23/18 13:17	03/12/18 14:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					02/23/18 13:17	03/12/18 14:50	1
Y Carrier	83.4		40 - 110					02/23/18 13:17	03/12/18 14:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.774		0.256	0.262	5.00	0.344	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04140 MW-2**

**Lab Sample ID: 400-149811-8**

**Date Collected: 02/13/18 12:22**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0534	U	0.0565	0.0567	1.00	0.0887	pCi/L	02/23/18 12:30	03/19/18 09:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					02/23/18 12:30	03/19/18 09:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.751		0.278	0.286	1.00	0.383	pCi/L	02/23/18 13:17	03/12/18 14:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					02/23/18 13:17	03/12/18 14:50	1
Y Carrier	84.1		40 - 110					02/23/18 13:17	03/12/18 14:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.804		0.284	0.292	5.00	0.383	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04139 MW-3**

**Lab Sample ID: 400-149811-9**

**Date Collected: 02/13/18 11:15**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0789	U	0.0594	0.0598	1.00	0.0794	pCi/L	02/23/18 12:30	03/19/18 09:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					02/23/18 12:30	03/19/18 09:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.570		0.271	0.276	1.00	0.393	pCi/L	02/23/18 13:17	03/12/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					02/23/18 13:17	03/12/18 14:51	1
Y Carrier	79.3		40 - 110					02/23/18 13:17	03/12/18 14:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.649		0.277	0.282	5.00	0.393	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04138 MW-4**

**Lab Sample ID: 400-149811-10**

**Date Collected: 02/13/18 10:14**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.136		0.0727	0.0737	1.00	0.0840	pCi/L	02/23/18 12:30	03/19/18 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					02/23/18 12:30	03/19/18 09:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.554		0.245	0.250	1.00	0.346	pCi/L	02/23/18 13:17	03/12/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					02/23/18 13:17	03/12/18 14:51	1
Y Carrier	81.5		40 - 110					02/23/18 13:17	03/12/18 14:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.690		0.256	0.261	5.00	0.346	pCi/L		03/20/18 16:02	1



# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04132 MW-5**

**Lab Sample ID: 400-149811-11**

**Date Collected: 02/14/18 10:55**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.134		0.0743	0.0753	1.00	0.0899	pCi/L	02/23/18 12:30	03/19/18 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					02/23/18 12:30	03/19/18 09:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.821		0.286	0.296	1.00	0.387	pCi/L	02/23/18 13:17	03/12/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					02/23/18 13:17	03/12/18 14:51	1
Y Carrier	81.1		40 - 110					02/23/18 13:17	03/12/18 14:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.955		0.295	0.305	5.00	0.387	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04133 MW-6**

**Lab Sample ID: 400-149811-12**

**Date Collected: 02/14/18 12:14**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.307		0.0988	0.103	1.00	0.0821	pCi/L	02/23/18 12:30	03/19/18 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					02/23/18 12:30	03/19/18 09:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.662		0.246	0.253	1.00	0.322	pCi/L	02/23/18 13:17	03/12/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					02/23/18 13:17	03/12/18 14:51	1
Y Carrier	78.9		40 - 110					02/23/18 13:17	03/12/18 14:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.969		0.265	0.273	5.00	0.322	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04134 MW-6 DUP**

**Lab Sample ID: 400-149811-13**

Date Collected: 02/14/18 12:14

Matrix: Water

Date Received: 02/19/18 16:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.331		0.102	0.106	1.00	0.0889	pCi/L	02/23/18 12:30	03/19/18 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					02/23/18 12:30	03/19/18 09:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.900		0.270	0.282	1.00	0.340	pCi/L	02/23/18 13:17	03/12/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					02/23/18 13:17	03/12/18 14:51	1
Y Carrier	84.5		40 - 110					02/23/18 13:17	03/12/18 14:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.23		0.289	0.301	5.00	0.340	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04135 MW-7**

**Lab Sample ID: 400-149811-14**

**Date Collected: 02/14/18 13:14**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.106		0.0625	0.0633	1.00	0.0738	pCi/L	02/23/18 12:30	03/19/18 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					02/23/18 12:30	03/19/18 09:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.630		0.280	0.286	1.00	0.405	pCi/L	02/23/18 13:17	03/12/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					02/23/18 13:17	03/12/18 14:51	1
Y Carrier	78.1		40 - 110					02/23/18 13:17	03/12/18 14:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.736		0.287	0.293	5.00	0.405	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04136 MW-8**

**Lab Sample ID: 400-149811-15**

**Date Collected: 02/14/18 14:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0600	U	0.0552	0.0555	1.00	0.0819	pCi/L	02/23/18 12:30	03/19/18 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					02/23/18 12:30	03/19/18 09:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.573		0.246	0.252	1.00	0.346	pCi/L	02/23/18 13:17	03/12/18 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					02/23/18 13:17	03/12/18 14:52	1
Y Carrier	80.0		40 - 110					02/23/18 13:17	03/12/18 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.633		0.252	0.258	5.00	0.346	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04137 FB-2**

**Lab Sample ID: 400-149811-16**

**Date Collected: 02/14/18 10:37**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00963	U	0.0453	0.0454	1.00	0.0903	pCi/L	02/23/18 12:30	03/19/18 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					02/23/18 12:30	03/19/18 09:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.433		0.222	0.226	1.00	0.325	pCi/L	02/23/18 13:17	03/12/18 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					02/23/18 13:17	03/12/18 14:52	1
Y Carrier	82.6		40 - 110					02/23/18 13:17	03/12/18 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.442		0.227	0.231	5.00	0.325	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04142 MW-13**

**Lab Sample ID: 400-149811-17**

**Date Collected: 02/13/18 14:33**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.145		0.0738	0.0750	1.00	0.0819	pCi/L	02/23/18 12:30	03/19/18 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					02/23/18 12:30	03/19/18 09:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.859	U G	2.24	2.25	1.00	3.90	pCi/L	03/15/18 12:00	03/20/18 18:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					03/15/18 12:00	03/20/18 18:15	1
Y Carrier	83.4		40 - 110					03/15/18 12:00	03/20/18 18:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.00	U	2.24	2.25	5.00	3.90	pCi/L		03/21/18 08:07	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04143 MW-14**

**Lab Sample ID: 400-149811-18**

**Date Collected: 02/13/18 15:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0466	U	0.0570	0.0572	1.00	0.0935	pCi/L	02/23/18 12:30	03/19/18 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					02/23/18 12:30	03/19/18 09:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.21		0.303	0.323	1.00	0.358	pCi/L	02/23/18 13:17	03/12/18 14:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					02/23/18 13:17	03/12/18 14:53	1
Y Carrier	78.5		40 - 110					02/23/18 13:17	03/12/18 14:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.26		0.308	0.328	5.00	0.358	pCi/L		03/20/18 16:02	1



# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04144 MW-14 DUP**

**Lab Sample ID: 400-149811-19**

**Date Collected: 02/13/18 15:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.156		0.0758	0.0771	1.00	0.0811	pCi/L	02/23/18 12:30	03/19/18 09:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					02/23/18 12:30	03/19/18 09:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.507		0.280	0.284	1.00	0.418	pCi/L	02/23/18 13:17	03/12/18 14:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					02/23/18 13:17	03/12/18 14:53	1
Y Carrier	75.1		40 - 110					02/23/18 13:17	03/12/18 14:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.663		0.290	0.294	5.00	0.418	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04145 FB-1**

**Lab Sample ID: 400-149811-20**

**Date Collected: 02/13/18 16:00**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0269	U	0.0549	0.0550	1.00	0.0993	pCi/L	02/23/18 12:30	03/19/18 09:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					02/23/18 12:30	03/19/18 09:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.08		0.301	0.317	1.00	0.377	pCi/L	02/23/18 13:17	03/12/18 14:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					02/23/18 13:17	03/12/18 14:53	1
Y Carrier	79.3		40 - 110					02/23/18 13:17	03/12/18 14:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.11		0.306	0.322	5.00	0.377	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04146 MW-15**

**Lab Sample ID: 400-149811-21**

Date Collected: 02/14/18 09:30

Matrix: Water

Date Received: 02/19/18 16:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.123		0.0667	0.0676	1.00	0.0743	pCi/L	02/23/18 14:31	03/19/18 06:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					02/23/18 14:31	03/19/18 06:20	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.78		0.380	0.414	1.00	0.458	pCi/L	02/23/18 15:19	03/08/18 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					02/23/18 15:19	03/08/18 14:01	1
Y Carrier	89.3		40 - 110					02/23/18 15:19	03/08/18 14:01	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.91		0.386	0.419	5.00	0.458	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04147 MW-16**

**Lab Sample ID: 400-149811-22**

**Date Collected: 02/14/18 10:42**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0543	U	0.0523	0.0525	1.00	0.0796	pCi/L	02/23/18 14:31	03/19/18 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					02/23/18 14:31	03/19/18 06:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.566		0.254	0.259	1.00	0.366	pCi/L	02/23/18 15:19	03/08/18 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					02/23/18 15:19	03/08/18 14:01	1
Y Carrier	86.7		40 - 110					02/23/18 15:19	03/08/18 14:01	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.621		0.259	0.264	5.00	0.366	pCi/L		03/20/18 16:02	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04148 MW-18**

**Lab Sample ID: 400-149811-23**

**Date Collected: 02/14/18 12:08**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0923		0.0601	0.0607	1.00	0.0770	pCi/L	02/23/18 14:31	03/19/18 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					02/23/18 14:31	03/19/18 06:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.05		0.289	0.305	1.00	0.364	pCi/L	02/23/18 15:19	03/08/18 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					02/23/18 15:19	03/08/18 14:01	1
Y Carrier	88.2		40 - 110					02/23/18 15:19	03/08/18 14:01	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.15		0.295	0.311	5.00	0.364	pCi/L		03/22/18 18:25	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04149 MW-19**

**Lab Sample ID: 400-149811-24**

Date Collected: 02/14/18 13:41

Matrix: Water

Date Received: 02/19/18 16:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.156		0.0727	0.0740	1.00	0.0797	pCi/L	02/23/18 14:31	03/19/18 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					02/23/18 14:31	03/19/18 06:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.929		0.317	0.328	1.00	0.446	pCi/L	02/23/18 15:19	03/08/18 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					02/23/18 15:19	03/08/18 14:01	1
Y Carrier	88.2		40 - 110					02/23/18 15:19	03/08/18 14:01	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.08		0.325	0.336	5.00	0.446	pCi/L		03/22/18 18:25	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04150 MW-20**

**Lab Sample ID: 400-149811-25**

Date Collected: 02/14/18 14:36

Matrix: Water

Date Received: 02/19/18 16:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.241		0.0870	0.0897	1.00	0.0785	pCi/L	02/23/18 14:31	03/19/18 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					02/23/18 14:31	03/19/18 06:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.23		0.317	0.337	1.00	0.403	pCi/L	02/23/18 15:19	03/08/18 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					02/23/18 15:19	03/08/18 14:01	1
Y Carrier	89.7		40 - 110					02/23/18 15:19	03/08/18 14:01	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.47		0.329	0.349	5.00	0.403	pCi/L		03/22/18 18:25	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04151 MW-11**

**Lab Sample ID: 400-149811-26**

Date Collected: 02/14/18 15:52

Matrix: Water

Date Received: 02/19/18 16:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.271		0.0888	0.0921	1.00	0.0806	pCi/L	02/23/18 14:31	03/19/18 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					02/23/18 14:31	03/19/18 06:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.47		0.332	0.358	1.00	0.403	pCi/L	02/23/18 15:19	03/08/18 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					02/23/18 15:19	03/08/18 14:01	1
Y Carrier	88.2		40 - 110					02/23/18 15:19	03/08/18 14:01	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.74		0.344	0.370	5.00	0.403	pCi/L		03/22/18 18:25	1



# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04152 MW-17R**

**Lab Sample ID: 400-149811-27**

**Date Collected: 02/15/18 10:03**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.164		0.0732	0.0746	1.00	0.0725	pCi/L	02/23/18 14:31	03/19/18 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					02/23/18 14:31	03/19/18 06:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.970		0.292	0.305	1.00	0.379	pCi/L	02/23/18 15:19	03/08/18 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					02/23/18 15:19	03/08/18 14:02	1
Y Carrier	89.7		40 - 110					02/23/18 15:19	03/08/18 14:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.13		0.301	0.314	5.00	0.379	pCi/L		03/22/18 18:25	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04153 MW-12**

**Lab Sample ID: 400-149811-28**

Date Collected: 02/15/18 11:22

Matrix: Water

Date Received: 02/19/18 16:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.133		0.0692	0.0703	1.00	0.0818	pCi/L	02/23/18 14:31	03/19/18 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					02/23/18 14:31	03/19/18 06:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.792		0.278	0.287	1.00	0.384	pCi/L	02/23/18 15:19	03/08/18 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					02/23/18 15:19	03/08/18 14:02	1
Y Carrier	90.1		40 - 110					02/23/18 15:19	03/08/18 14:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.925		0.286	0.295	5.00	0.384	pCi/L		03/22/18 18:25	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04154 MW-10**

**Lab Sample ID: 400-149811-29**

**Date Collected: 02/15/18 13:25**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.174		0.0903	0.0917	1.00	0.104	pCi/L	02/23/18 08:41	03/19/18 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					02/23/18 08:41	03/19/18 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.376		0.222	0.225	1.00	0.332	pCi/L	02/23/18 09:18	03/09/18 15:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					02/23/18 09:18	03/09/18 15:27	1
Y Carrier	91.2		40 - 110					02/23/18 09:18	03/09/18 15:27	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.550		0.240	0.243	5.00	0.332	pCi/L		03/22/18 18:25	1

# Client Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04155 EB-1**

**Lab Sample ID: 400-149811-30**

**Date Collected: 02/15/18 14:15**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0185	U	0.0439	0.0439	1.00	0.108	pCi/L	02/23/18 08:41	03/19/18 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					02/23/18 08:41	03/19/18 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00594	U	0.194	0.194	1.00	0.350	pCi/L	02/23/18 09:18	03/09/18 15:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					02/23/18 09:18	03/09/18 15:27	1
Y Carrier	93.1		40 - 110					02/23/18 09:18	03/09/18 15:27	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0244	U	0.199	0.199	5.00	0.350	pCi/L		03/22/18 18:25	1

# Definitions/Glossary

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

TestAmerica Job ID: 400-149811-2  
SDG: Gorgas Landfill 1137

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
G	The Sample MDC is greater than the requested RL.

## Glossary

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

# Lab Chronicle

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

TestAmerica Job ID: 400-149811-2  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04141 MW-1**

**Lab Sample ID: 400-149811-7**

**Date Collected: 02/13/18 13:19**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:50	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04140 MW-2**

**Lab Sample ID: 400-149811-8**

**Date Collected: 02/13/18 12:22**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:50	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04139 MW-3**

**Lab Sample ID: 400-149811-9**

**Date Collected: 02/13/18 11:15**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:51	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04138 MW-4**

**Lab Sample ID: 400-149811-10**

**Date Collected: 02/13/18 10:14**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:51	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

# Lab Chronicle

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

TestAmerica Job ID: 400-149811-2  
SDG: Gorgas Landfill 1137

**Client Sample ID: AY04132 MW-5**

**Lab Sample ID: 400-149811-11**

**Date Collected: 02/14/18 10:55**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:51	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04133 MW-6**

**Lab Sample ID: 400-149811-12**

**Date Collected: 02/14/18 12:14**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:51	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04134 MW-6 DUP**

**Lab Sample ID: 400-149811-13**

**Date Collected: 02/14/18 12:14**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:51	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04135 MW-7**

**Lab Sample ID: 400-149811-14**

**Date Collected: 02/14/18 13:14**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:51	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

# Lab Chronicle

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04136 MW-8**

**Lab Sample ID: 400-149811-15**

**Date Collected: 02/14/18 14:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04137 FB-2**

**Lab Sample ID: 400-149811-16**

**Date Collected: 02/14/18 10:37**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355046	03/12/18 14:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04142 MW-13**

**Lab Sample ID: 400-149811-17**

**Date Collected: 02/13/18 14:33**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355865	03/15/18 12:00	TJT	TAL SL
Total/NA	Analysis	9320		1	356517	03/20/18 18:15	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356790	03/21/18 08:07	RTM	TAL SL

**Client Sample ID: AY04143 MW-14**

**Lab Sample ID: 400-149811-18**

**Date Collected: 02/13/18 15:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 09:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355047	03/12/18 14:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL



# Lab Chronicle

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04144 MW-14 DUP**

**Lab Sample ID: 400-149811-19**

**Date Collected: 02/13/18 15:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356227	03/19/18 09:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355047	03/12/18 14:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04145 FB-1**

**Lab Sample ID: 400-149811-20**

**Date Collected: 02/13/18 16:00**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352702	02/23/18 12:30	JTR	TAL SL
Total/NA	Analysis	9315		1	356227	03/19/18 09:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352715	02/23/18 13:17	JTR	TAL SL
Total/NA	Analysis	9320		1	355047	03/12/18 14:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04146 MW-15**

**Lab Sample ID: 400-149811-21**

**Date Collected: 02/14/18 09:30**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352721	02/23/18 14:31	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 06:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352722	02/23/18 15:19	JTR	TAL SL
Total/NA	Analysis	9320		1	354493	03/08/18 14:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

**Client Sample ID: AY04147 MW-16**

**Lab Sample ID: 400-149811-22**

**Date Collected: 02/14/18 10:42**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352721	02/23/18 14:31	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 06:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352722	02/23/18 15:19	JTR	TAL SL
Total/NA	Analysis	9320		1	354493	03/08/18 14:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	356757	03/20/18 16:02	RTM	TAL SL

# Lab Chronicle

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04148 MW-18**

**Lab Sample ID: 400-149811-23**

**Date Collected: 02/14/18 12:08**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352721	02/23/18 14:31	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 06:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352722	02/23/18 15:19	JTR	TAL SL
Total/NA	Analysis	9320		1	354493	03/08/18 14:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	357254	03/22/18 18:25	RTM	TAL SL

**Client Sample ID: AY04149 MW-19**

**Lab Sample ID: 400-149811-24**

**Date Collected: 02/14/18 13:41**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352721	02/23/18 14:31	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 06:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352722	02/23/18 15:19	JTR	TAL SL
Total/NA	Analysis	9320		1	354493	03/08/18 14:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	357254	03/22/18 18:25	RTM	TAL SL

**Client Sample ID: AY04150 MW-20**

**Lab Sample ID: 400-149811-25**

**Date Collected: 02/14/18 14:36**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352721	02/23/18 14:31	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 06:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352722	02/23/18 15:19	JTR	TAL SL
Total/NA	Analysis	9320		1	354493	03/08/18 14:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	357254	03/22/18 18:25	RTM	TAL SL

**Client Sample ID: AY04151 MW-11**

**Lab Sample ID: 400-149811-26**

**Date Collected: 02/14/18 15:52**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352721	02/23/18 14:31	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 06:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352722	02/23/18 15:19	JTR	TAL SL
Total/NA	Analysis	9320		1	354493	03/08/18 14:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	357254	03/22/18 18:25	RTM	TAL SL

# Lab Chronicle

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

**Client Sample ID: AY04152 MW-17R**

**Lab Sample ID: 400-149811-27**

**Date Collected: 02/15/18 10:03**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352721	02/23/18 14:31	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 06:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352722	02/23/18 15:19	JTR	TAL SL
Total/NA	Analysis	9320		1	354493	03/08/18 14:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	357254	03/22/18 18:25	RTM	TAL SL

**Client Sample ID: AY04153 MW-12**

**Lab Sample ID: 400-149811-28**

**Date Collected: 02/15/18 11:22**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352721	02/23/18 14:31	JTR	TAL SL
Total/NA	Analysis	9315		1	356225	03/19/18 06:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352722	02/23/18 15:19	JTR	TAL SL
Total/NA	Analysis	9320		1	354493	03/08/18 14:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	357254	03/22/18 18:25	RTM	TAL SL

**Client Sample ID: AY04154 MW-10**

**Lab Sample ID: 400-149811-29**

**Date Collected: 02/15/18 13:25**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352571	02/23/18 08:41	JTR	TAL SL
Total/NA	Analysis	9315		1	356226	03/19/18 06:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352664	02/23/18 09:18	JTR	TAL SL
Total/NA	Analysis	9320		1	354794	03/09/18 15:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	357254	03/22/18 18:25	RTM	TAL SL

**Client Sample ID: AY04155 EB-1**

**Lab Sample ID: 400-149811-30**

**Date Collected: 02/15/18 14:15**

**Matrix: Water**

**Date Received: 02/19/18 16:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			352571	02/23/18 08:41	JTR	TAL SL
Total/NA	Analysis	9315		1	356226	03/19/18 06:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			352664	02/23/18 09:18	JTR	TAL SL
Total/NA	Analysis	9320		1	354794	03/09/18 15:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	357254	03/22/18 18:25	RTM	TAL SL

**Laboratory References:**

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

# QC Association Summary

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

## Rad

### Prep Batch: 352571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149811-29	AY04154 MW-10	Total/NA	Water	PrecSep-21	
400-149811-30	AY04155 EB-1	Total/NA	Water	PrecSep-21	
MB 160-352571/21-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-352571/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-352571/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 352664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149811-29	AY04154 MW-10	Total/NA	Water	PrecSep_0	
400-149811-30	AY04155 EB-1	Total/NA	Water	PrecSep_0	
MB 160-352664/21-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-352664/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-352664/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

### Prep Batch: 352702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149811-7	AY04141 MW-1	Total/NA	Water	PrecSep-21	
400-149811-8	AY04140 MW-2	Total/NA	Water	PrecSep-21	
400-149811-9	AY04139 MW-3	Total/NA	Water	PrecSep-21	
400-149811-10	AY04138 MW-4	Total/NA	Water	PrecSep-21	
400-149811-11	AY04132 MW-5	Total/NA	Water	PrecSep-21	
400-149811-12	AY04133 MW-6	Total/NA	Water	PrecSep-21	
400-149811-13	AY04134 MW-6 DUP	Total/NA	Water	PrecSep-21	
400-149811-14	AY04135 MW-7	Total/NA	Water	PrecSep-21	
400-149811-15	AY04136 MW-8	Total/NA	Water	PrecSep-21	
400-149811-16	AY04137 FB-2	Total/NA	Water	PrecSep-21	
400-149811-17	AY04142 MW-13	Total/NA	Water	PrecSep-21	
400-149811-18	AY04143 MW-14	Total/NA	Water	PrecSep-21	
400-149811-19	AY04144 MW-14 DUP	Total/NA	Water	PrecSep-21	
400-149811-20	AY04145 FB-1	Total/NA	Water	PrecSep-21	
MB 160-352702/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-352702/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-149811-14 DU	AY04135 MW-7	Total/NA	Water	PrecSep-21	
400-149811-A-3-B DU	Duplicate	Total/NA	Water	PrecSep-21	

### Prep Batch: 352715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149811-7	AY04141 MW-1	Total/NA	Water	PrecSep_0	
400-149811-8	AY04140 MW-2	Total/NA	Water	PrecSep_0	
400-149811-9	AY04139 MW-3	Total/NA	Water	PrecSep_0	
400-149811-10	AY04138 MW-4	Total/NA	Water	PrecSep_0	
400-149811-11	AY04132 MW-5	Total/NA	Water	PrecSep_0	
400-149811-12	AY04133 MW-6	Total/NA	Water	PrecSep_0	
400-149811-13	AY04134 MW-6 DUP	Total/NA	Water	PrecSep_0	
400-149811-14	AY04135 MW-7	Total/NA	Water	PrecSep_0	
400-149811-15	AY04136 MW-8	Total/NA	Water	PrecSep_0	
400-149811-16	AY04137 FB-2	Total/NA	Water	PrecSep_0	
400-149811-18	AY04143 MW-14	Total/NA	Water	PrecSep_0	
400-149811-19	AY04144 MW-14 DUP	Total/NA	Water	PrecSep_0	
400-149811-20	AY04145 FB-1	Total/NA	Water	PrecSep_0	
MB 160-352715/24-A	Method Blank	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

# QC Association Summary

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

TestAmerica Job ID: 400-149811-2  
SDG: Gorgas Landfill 1137

## Rad (Continued)

### Prep Batch: 352715 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-352715/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-149811-14 DU	AY04135 MW-7	Total/NA	Water	PrecSep_0	
400-149811-A-3-D DU	Duplicate	Total/NA	Water	PrecSep_0	

### Prep Batch: 352721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149811-21	AY04146 MW-15	Total/NA	Water	PrecSep-21	
400-149811-22	AY04147 MW-16	Total/NA	Water	PrecSep-21	
400-149811-23	AY04148 MW-18	Total/NA	Water	PrecSep-21	
400-149811-24	AY04149 MW-19	Total/NA	Water	PrecSep-21	
400-149811-25	AY04150 MW-20	Total/NA	Water	PrecSep-21	
400-149811-26	AY04151 MW-11	Total/NA	Water	PrecSep-21	
400-149811-27	AY04152 MW-17R	Total/NA	Water	PrecSep-21	
400-149811-28	AY04153 MW-12	Total/NA	Water	PrecSep-21	
MB 160-352721/19-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-352721/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-149811-22 DU	AY04147 MW-16	Total/NA	Water	PrecSep-21	

### Prep Batch: 352722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149811-21	AY04146 MW-15	Total/NA	Water	PrecSep_0	
400-149811-22	AY04147 MW-16	Total/NA	Water	PrecSep_0	
400-149811-23	AY04148 MW-18	Total/NA	Water	PrecSep_0	
400-149811-24	AY04149 MW-19	Total/NA	Water	PrecSep_0	
400-149811-25	AY04150 MW-20	Total/NA	Water	PrecSep_0	
400-149811-26	AY04151 MW-11	Total/NA	Water	PrecSep_0	
400-149811-27	AY04152 MW-17R	Total/NA	Water	PrecSep_0	
400-149811-28	AY04153 MW-12	Total/NA	Water	PrecSep_0	
MB 160-352722/19-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-352722/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-149811-22 DU	AY04147 MW-16	Total/NA	Water	PrecSep_0	

### Prep Batch: 355865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-149811-17	AY04142 MW-13	Total/NA	Water	PrecSep_0	
MB 160-355865/4-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-355865/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-355865/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

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

**Lab Sample ID: MB 160-352571/21-A**  
**Matrix: Water**  
**Analysis Batch: 356226**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 352571**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04923	U	0.0566	0.0568	1.00	0.0901	pCi/L	02/23/18 08:41	03/19/18 06:32	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					02/23/18 08:41	03/19/18 06:32	1

**Lab Sample ID: LCS 160-352571/1-A**  
**Matrix: Water**  
**Analysis Batch: 356227**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 352571**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	12.03		1.24	1.00	0.0872	pCi/L	102	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	96.2		40 - 110						

**Lab Sample ID: LCSD 160-352571/2-A**  
**Matrix: Water**  
**Analysis Batch: 356227**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 352571**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.8	11.29		1.17	1.00	0.0744	pCi/L	96	68 - 137	0.31	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	96.8		40 - 110								

**Lab Sample ID: MB 160-352702/24-A**  
**Matrix: Water**  
**Analysis Batch: 356227**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 352702**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1241		0.0709	0.0718	1.00	0.0836	pCi/L	02/23/18 12:42	03/19/18 09:04	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					02/23/18 12:42	03/19/18 09:04	1

**Lab Sample ID: LCS 160-352702/1-A**  
**Matrix: Water**  
**Analysis Batch: 356225**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 352702**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	10.57		1.09	1.00	0.106	pCi/L	90	68 - 137

TestAmerica Pensacola

# QC Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

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

**Lab Sample ID: LCS 160-352702/1-A**  
**Matrix: Water**  
**Analysis Batch: 356225**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 352702**

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	107		40 - 110

**Lab Sample ID: 400-149811-14 DU**  
**Matrix: Water**  
**Analysis Batch: 356225**

**Client Sample ID: AY04135 MW-7**  
**Prep Type: Total/NA**  
**Prep Batch: 352702**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.106		0.09061		0.0652	1.00	0.0887	pCi/L	0.12	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	105		40 - 110

**Lab Sample ID: 400-149811-A-3-B DU**  
**Matrix: Water**  
**Analysis Batch: 356225**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 352702**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.163		0.1064		0.0749	1.00	0.103	pCi/L	0.38	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	103		40 - 110

**Lab Sample ID: MB 160-352721/19-A**  
**Matrix: Water**  
**Analysis Batch: 356225**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 352721**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.002527	U	0.0326	0.0326	1.00	0.0741	pCi/L	02/23/18 14:31	03/19/18 06:21	1

	MB	MB		Prepared	Analyzed	Dil Fac
Carrier	%Yield	Qualifier	Limits			
Ba Carrier	102		40 - 110	02/23/18 14:31	03/19/18 06:21	1

**Lab Sample ID: LCS 160-352721/1-A**  
**Matrix: Water**  
**Analysis Batch: 356225**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 352721**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	11.25		1.14	1.00	0.0974	pCi/L	95	68 - 137

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	101		40 - 110

TestAmerica Pensacola

# QC Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

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

**Lab Sample ID: 400-149811-22 DU**  
**Matrix: Water**  
**Analysis Batch: 356225**

**Client Sample ID: AY04147 MW-16**  
**Prep Type: Total/NA**  
**Prep Batch: 352721**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0543	U	0.1684		0.0748	1.00	0.0709	pCi/L	0.90	1
<b>Carrier</b>	<b>%Yield</b>	<b>DU Qualifier</b>	<b>Limits</b>							
Ba Carrier	96.5		40 - 110							

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

**Lab Sample ID: MB 160-352664/21-A**  
**Matrix: Water**  
**Analysis Batch: 354891**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 352664**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1076	U	0.191	0.191	1.00	0.363	pCi/L	02/23/18 09:18	03/09/18 15:22	1
<b>Carrier</b>	<b>%Yield</b>	<b>MB Qualifier</b>	<b>Limits</b>				<b>Prepared</b>		<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	98.5		40 - 110				02/23/18 09:18		03/09/18 15:22	1
Y Carrier	94.2		40 - 110				02/23/18 09:18		03/09/18 15:22	1

**Lab Sample ID: LCS 160-352664/1-A**  
**Matrix: Water**  
**Analysis Batch: 354794**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 352664**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.49	8.102		0.970	1.00	0.365	pCi/L	95	56 - 140
<b>Carrier</b>	<b>%Yield</b>	<b>LCS Qualifier</b>	<b>Limits</b>						
Ba Carrier	96.2		40 - 110						
Y Carrier	93.1		40 - 110						

**Lab Sample ID: LCSD 160-352664/2-A**  
**Matrix: Water**  
**Analysis Batch: 354794**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 352664**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	8.49	7.574		0.918	1.00	0.351	pCi/L	89	56 - 140	0.28	1
<b>Carrier</b>	<b>%Yield</b>	<b>LCSD Qualifier</b>	<b>Limits</b>								
Ba Carrier	96.8		40 - 110								
Y Carrier	92.3		40 - 110								



# QC Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

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

**Lab Sample ID: MB 160-352715/24-A**  
**Matrix: Water**  
**Analysis Batch: 355047**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 352715**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7297		0.278	0.286	1.00	0.377	pCi/L	02/23/18 13:17	03/12/18 14:53	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					02/23/18 13:17	03/12/18 14:53	1
Y Carrier	78.9		40 - 110					02/23/18 13:17	03/12/18 14:53	1

**Lab Sample ID: LCS 160-352715/1-A**  
**Matrix: Water**  
**Analysis Batch: 355046**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 352715**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.49	9.436		1.10	1.00	0.396	pCi/L	111	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	107		40 - 110						
Y Carrier	78.1		40 - 110						

**Lab Sample ID: 400-149811-14 DU**  
**Matrix: Water**  
**Analysis Batch: 355046**

**Client Sample ID: AY04135 MW-7**  
**Prep Type: Total/NA**  
**Prep Batch: 352715**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.630		0.6208		0.293	1.00	0.422	pCi/L	0.02	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	105		40 - 110							
Y Carrier	78.9		40 - 110							

**Lab Sample ID: 400-149811-A-3-D DU**  
**Matrix: Water**  
**Analysis Batch: 355046**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 352715**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.469		0.3640	U	0.242	1.00	0.368	pCi/L	0.21	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	103		40 - 110							
Y Carrier	81.1		40 - 110							

# QC Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

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

**Lab Sample ID: MB 160-352722/19-A**  
**Matrix: Water**  
**Analysis Batch: 354493**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 352722**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7174		0.241	0.250	1.00	0.318	pCi/L	02/23/18 15:19	03/08/18 14:02	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					02/23/18 15:19	03/08/18 14:02	1
Y Carrier	91.2		40 - 110					02/23/18 15:19	03/08/18 14:02	1

**Lab Sample ID: LCS 160-352722/1-A**  
**Matrix: Water**  
**Analysis Batch: 354493**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 352722**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.50	8.691		1.01	1.00	0.348	pCi/L	102	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						
Y Carrier	89.3		40 - 110						

**Lab Sample ID: 400-149811-22 DU**  
**Matrix: Water**  
**Analysis Batch: 354493**

**Client Sample ID: AY04147 MW-16**  
**Prep Type: Total/NA**  
**Prep Batch: 352722**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.566		0.2810	U	0.232	1.00	0.367	pCi/L	0.58	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	96.5		40 - 110							
Y Carrier	88.6		40 - 110							

**Lab Sample ID: MB 160-355865/4-A**  
**Matrix: Water**  
**Analysis Batch: 356517**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 355865**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.548	U G	2.15	2.16	1.00	3.60	pCi/L	03/15/18 12:00	03/20/18 18:15	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					03/15/18 12:00	03/20/18 18:15	1
Y Carrier	81.9		40 - 110					03/15/18 12:00	03/20/18 18:15	1

# QC Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

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

**Lab Sample ID: LCS 160-355865/1-A**  
**Matrix: Water**  
**Analysis Batch: 356517**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 355865**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits												
Radium-228	84.6	82.25		9.73	1.00	3.81	pCi/L	97	56 - 140												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Carrier</th> <th>LCS %Yield</th> <th>LCS Qualifier</th> <th>Limits</th> </tr> </thead> <tbody> <tr> <td>Ba Carrier</td> <td>103</td> <td></td> <td>40 - 110</td> </tr> <tr> <td>Y Carrier</td> <td>87.9</td> <td></td> <td>40 - 110</td> </tr> </tbody> </table>										Carrier	LCS %Yield	LCS Qualifier	Limits	Ba Carrier	103		40 - 110	Y Carrier	87.9		40 - 110
Carrier	LCS %Yield	LCS Qualifier	Limits																		
Ba Carrier	103		40 - 110																		
Y Carrier	87.9		40 - 110																		

**Lab Sample ID: LCSD 160-355865/2-A**  
**Matrix: Water**  
**Analysis Batch: 356517**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 355865**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit												
Radium-228	84.6	90.34		10.6	1.00	4.12	pCi/L	107	56 - 140	0.40	1												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Carrier</th> <th>LCSD %Yield</th> <th>LCSD Qualifier</th> <th>Limits</th> </tr> </thead> <tbody> <tr> <td>Ba Carrier</td> <td>98.2</td> <td></td> <td>40 - 110</td> </tr> <tr> <td>Y Carrier</td> <td>87.5</td> <td></td> <td>40 - 110</td> </tr> </tbody> </table>												Carrier	LCSD %Yield	LCSD Qualifier	Limits	Ba Carrier	98.2		40 - 110	Y Carrier	87.5		40 - 110
Carrier	LCSD %Yield	LCSD Qualifier	Limits																				
Ba Carrier	98.2		40 - 110																				
Y Carrier	87.5		40 - 110																				

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

**Lab Sample ID: 400-149811-14 DU**  
**Matrix: Water**  
**Analysis Batch: 356757**

**Client Sample ID: AY04135 MW-7**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.736		0.7114		0.300	5.00	0.422	pCi/L	0.04	

**Lab Sample ID: 400-149811-22 DU**  
**Matrix: Water**  
**Analysis Batch: 356757**

**Client Sample ID: AY04147 MW-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.621		0.4494		0.244	5.00	0.367	pCi/L	0.34	

# QC Sample Results

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

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

Lab Sample ID: 400-149811-A-3 DU  
 Matrix: Water  
 Analysis Batch: 356757

Client Sample ID: Duplicate  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.633		0.4704		0.253	5.00	0.368	pCi/L	0.31	

- 1
- 2
- 3
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- 13

# Chain of Custody Record



<b>Client Information</b>		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-56525-24537.1	
Sarah Copeland		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 2		Job #:	
Alabama Power General Test Laboratory		Due Date Requested:		<b>Analysis Requested</b> 9315 Ra226, 9320 Ra228, Ra228Raz28, GFCP Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> D Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> D Total Number of Containers		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NH4SO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
744 County Rd 87 GSC #8		TAT Requested (days): Routine					
City: Callera							
State, Zip: AL, 35040							
PO #: 205-664-6121(Tel)							
WO #: 40007143							
Project #: 40007143							
SSOW#: Gorgas Landfill 1137							
Site:							
Gorgas Landfill 1137							
<b>Sample Identification</b>		Matrix (W=water, S=solid, O=organic, A=air)		Special Instructions/Note:			
AY04132	2/14/18	1055	G	Water		1	MW-5
AY04133	2/14/18	1214	G	Water		1	MW-6
AY04134	2/14/18	1214	G	Water		1	MW-6 Dup (Sample Duplicate)
AY04135	2/14/18	1314	G	Water		3	MW-7
AY04136	2/14/18	1430	G	Water		1	MW-8
AY04137	2/14/18	1037	G	Water		1	FB-2 (Field Blank)
AY04141	2/13/18	1319	G	Water		1	MW-1
AY04140	2/13/18	1222	G	Water		1	MW-2
AY04139	2/13/18	1115	G	Water		1	MW-3
AY04138	2/13/18	1014	G	Water		1	MW-4
AY04142	2/13/18	1433	G	Water		1	MW-13
AY04143	2/13/18	1530	G	Water		1	MW-14
AY04144	2/13/18	1530	G	Water		1	MW-14 Dup (Sample Duplicate)
AY04145	2/13/18	1600	G	Water		1	FB-1 (Field Blank)
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<b>Deliverable Requested:</b> I, II, III, IV, Other (specify)		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		<b>Special Instructions/QC Requirements:</b>	
Empty Kit Relinquished by:		Date/Time: 2/19/2018, 1030		Company: APC		Date/Time: 2/19/18 10:30 AM	
Relinquished by: Sarah Copeland		Date/Time:		Company:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) and Other Remarks: 10-16.7°C PL-7			



### Chain of Custody Record

<b>Client Information</b>		<b>Lab PM:</b> Whitmore, Chyenne R		<b>Carrier Tracking No(s):</b>				
Client Contact: Sarah Copeland Company: Alabama Power General Test Laboratory		Sampler: Ben Rofschadl Phone:		COC No: 400-56525-24537.1 Page: Page 2 of 2 Job #:				
Address: 744 County Rd 87 GSC #8 City: Callera State, Zip: AL, 35040 Phone: 205-664-6121(Tel) Email: sccopela@southermco.com Project Name: CCR Site: Gorgas Landfill 1137		Due Date Requested: TAT Requested (days): Routine		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:				
PO #: WO #: Project #: 40007143 SSON#:		Perform MS/MSD (Yes or No)		Total Number of containers				
Sample Identification		Field Filtered Sample (Yes or No)		Special Instructions/Note:				
AY04146	2/14/18	0930	G	Water	X	1	MW-15	
AY04147	2/14/18	1042	G	Water	X	3	MW-16	
AY04148	2/14/18	1208	G	Water	X	1	MW-18	
AY04149	2/14/18	1341	G	Water	X	1	MW-19	
AY04150	2/14/18	1436	G	Water	X	1	MW-20	
AY04151	2/14/18	1552	G	Water	X	1	MW-11	
AY04152	2/15/18	1003	G	Water	X	1	MW-17R	
AY04153	2/15/18	1122	G	Water	X	1	MW-12	
AY04154	2/15/18	1325	G	Water	X	1	MW-10	
AY04155	2/15/18	1415	G	Water	X	1	EB-1 (Equipment Blank)	

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

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: Sarah Copeland Date/Time: 2/19/2018; 1030  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

Special Instructions/QC Requirements:

Method of Shipment: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time: 2/19/18 1055  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Cooler Temperature(s) (C and Other Remarks): 16.7C

Custody Seals Intact:  Yes  No  Δ Custody Seal No.: \_\_\_\_\_



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-149811-2  
SDG Number: Gorgas Landfill 1137

**Login Number: 149811**

**List Number: 1**

**Creator: Whitmire, Cheyenne R**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	16.2°c, 16.2°c ir-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-149811-2  
SDG Number: Gorgas Landfill 1137

**Login Number: 149811**  
**List Number: 2**  
**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**  
**List Creation: 02/22/18 11:27 AM**

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



# Accreditation/Certification Summary

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

TestAmerica Job ID: 400-149811-2  
 SDG: Gorgas Landfill 1137

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

## Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542018-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18 *

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

# Accreditation/Certification Summary

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

TestAmerica Job ID: 400-149811-2  
SDG: Gorgas Landfill 1137

## Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Identification Number	Expiration Date
North Dakota	State Program	8	R207	06-30-18
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18

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**

### **2018 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 present in MW-3 when pumping was initiated. Orange coloration diminished after further pumping.

Rain showers moved into the area when pumping and sampling well MW-5.

Field quality control procedures were performed as follows:

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

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

# Analytical Report



**Sample Group :** WMWGORLF\_1152  
**Project/Site :** Gorgas Landfill  
Parrish, AL 35580  
**For :** Southern Company Services  
3535 Colonnade Parkway  
Birmingham, AL 35243  
**Attention :** Dustin Brooks & Greg Dyer  
**Released By :** Sarah Copeland  
sgcopela@southernco.com  
(205) 664-6121

The following data has been reviewed and approved by:

**Quality Control:** Sarah Copeland  
Digitally signed by Sarah Copeland  
DN: cn=Sarah Copeland, o, ou,  
email=sgcopela@southernco.com,  
c=US  
Date: 2018.07.05 13:56:54 -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: 2018.07.10 17:13:00 -05'00'



Metals ICP

Gorgas Landfill

WMWGORLF\_1152

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY12394	621636	WMWGORLF_1152
AY12395	621636	WMWGORLF_1152
AY12396	621636	WMWGORLF_1152
AY12397	621636	WMWGORLF_1152
AY12398	621636	WMWGORLF_1152
AY12399	621636	WMWGORLF_1152
AY12400	621636	WMWGORLF_1152
AY12401	621636	WMWGORLF_1152
AY12402	621636	WMWGORLF_1152
AY12403	621636	WMWGORLF_1152
AY12404	621637	WMWGORLF_1152
AY12405	621637	WMWGORLF_1152
AY12406	621637	WMWGORLF_1152
AY12407	621637	WMWGORLF_1152
AY12408	621637	WMWGORLF_1152
AY12409	621637	WMWGORLF_1152
AY12410	621637	WMWGORLF_1152
AY12411	621637	WMWGORLF_1152
AY12412	621637	WMWGORLF_1152
AY12413	621637	WMWGORLF_1152
AY12414	621638	WMWGORLF_1152
AY12415	621638	WMWGORLF_1152
AY12416	621638	WMWGORLF_1152
AY12417	621638	WMWGORLF_1152

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met, with the following exception:

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AY12403
Calcium	AY12413

The concentrations of the sample matrix spike/matrix spike duplicate added before digestion is less than 30 percent of the sample concentration, causing inaccurate spike recovery information. The laboratory control sample indicates that the digestion and analysis were in control.

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



7. All samples were analyzed at a x2.03 dilution to compensate for potential matrix effects. The following samples were diluted due to analyzed sample concentration over the high standard of the calibration curve.

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AY12394	Calcium	x10.15
AY12395	Calcium	x10.15
AY12396	Calcium	x10.15
AY12397	Calcium	x10.15
AY12398	Calcium	x10.15
AY12400	Calcium	x101.5
AY12401	Calcium	x10.15
AY12402	Calcium	x10.15
AY12403	Calcium	x10.15
AY12403MS	Calcium	x10.15
AY12403MSD	Calcium	x10.15
AY12404	Calcium	x10.15
AY12405	Calcium	x10.15
AY12406	Calcium	x10.15
AY12408	Calcium	x101.5
AY12409	Calcium	x101.5
AY12410	Calcium	x10.15
AY12411	Calcium	x10.15
AY12412	Calcium	x101.5
AY12413	Calcium	x10.15
AY12413MS	Calcium	x10.15
AY12413MSD	Calcium	x10.15
AY12414	Calcium	x10.15
AY12415	Calcium	x10.15
AY12416	Calcium	x10.15

8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF\_1152

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY12394	621106	WMWGORLF_1152
AY12395	621106	WMWGORLF_1152
AY12396	621106	WMWGORLF_1152
AY12397	621106	WMWGORLF_1152
AY12398	621106	WMWGORLF_1152
AY12399	621106	WMWGORLF_1152
AY12400	621106	WMWGORLF_1152
AY12401	621106	WMWGORLF_1152
AY12402	621106	WMWGORLF_1152
AY12403	621106	WMWGORLF_1152
AY12404	621107	WMWGORLF_1152
AY12405	621107	WMWGORLF_1152
AY12406	621107	WMWGORLF_1152
AY12407	621107	WMWGORLF_1152
AY12408	621107	WMWGORLF_1152
AY12409	621107	WMWGORLF_1152
AY12410	621107	WMWGORLF_1152
AY12411	621107	WMWGORLF_1152
AY12412	621107	WMWGORLF_1152
AY12413	621107	WMWGORLF_1152
AY12414	621108	WMWGORLF_1152
AY12415	621108	WMWGORLF_1152
AY12416	621108	WMWGORLF_1152
AY12417	621108	WMWGORLF_1152

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 except for AY12411. Only Cd, Sb, and Ba were reported from the original run. Re-ran sample AY12411 on 6/08/18 with all passing QC associated for the remaining analytes (As, Be, Co, Cr, Mo, Pb, Sb, Se, Tl).

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. All samples were analyzed at a dilution of 1 to 5 to compensate for any matrix effects.
  8. The raw data results are shown with dilution factors included.



Mercury

Gorgas Landfill

WMWGORLF\_1152

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY12394	620752	WMWGORLF_1152
AY12395	620752	WMWGORLF_1152
AY12396	620752	WMWGORLF_1152
AY12397	620752	WMWGORLF_1152
AY12398	620752	WMWGORLF_1152
AY12399	620752	WMWGORLF_1152
AY12400	620752	WMWGORLF_1152
AY12401	620752	WMWGORLF_1152
AY12402	620752	WMWGORLF_1152
AY12403	620752	WMWGORLF_1152
AY12404	620753	WMWGORLF_1152
AY12405	620753	WMWGORLF_1152
AY12406	620753	WMWGORLF_1152
AY12407	620753	WMWGORLF_1152
AY12408	620753	WMWGORLF_1152
AY12409	620753	WMWGORLF_1152
AY12410	620753	WMWGORLF_1152
AY12411	620753	WMWGORLF_1152
AY12412	620753	WMWGORLF_1152
AY12413	620753	WMWGORLF_1152
AY12414	620754	WMWGORLF_1152
AY12415	620754	WMWGORLF_1152
AY12416	620754	WMWGORLF_1152
AY12417	620754	WMWGORLF_1152

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\_1152

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY12394	620815	WMWGORLF_1152
AY12395	620815	WMWGORLF_1152
AY12396	620815	WMWGORLF_1152
AY12397	620815	WMWGORLF_1152
AY12398	620816	WMWGORLF_1152
AY12399	620816	WMWGORLF_1152
AY12400	620816	WMWGORLF_1152
AY12401	620816	WMWGORLF_1152
AY12402	620816	WMWGORLF_1152
AY12403	620816	WMWGORLF_1152
AY12404	620816	WMWGORLF_1152
AY12405	620816	WMWGORLF_1152
AY12406	620816	WMWGORLF_1152
AY12407	620816	WMWGORLF_1152
AY12408	620999	WMWGORLF_1152
AY12409	620999	WMWGORLF_1152
AY12410	620999	WMWGORLF_1152
AY12411	620999	WMWGORLF_1152
AY12412	620999	WMWGORLF_1152
AY12413	621000	WMWGORLF_1152
AY12414	621000	WMWGORLF_1152
AY12415	621000	WMWGORLF_1152
AY12416	621000	WMWGORLF_1152
AY12417	621000	WMWGORLF_1152

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 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.
- All samples were between 2.5mg and 200mg residue with the exception of AY12399, AY12407, and AY12417 which did not meet the 2.5mg residue requirement. Maximum volume of 150mL filtered.

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY12394

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0150	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0651	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	321	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0114	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	J 0.0241	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	J 0.00230	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	2760	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY12394

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046	93.2	70 to 130	0.500	20
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115	98.5	70 to 130	0.774	20
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115	100	70 to 130	4.27	20
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115	102	70 to 130	1.43	20
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115	104	70 to 130	2.03	20
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115	101	70 to 130	0.900	20
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115	94.0	70 to 130	0.815	20
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75	-150	70 to 130	4.28	20
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115	103	70 to 130	4.34	20
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115	102	70 to 130	1.76	20
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15	99.6	70 to 130	0.863	20
AY12403	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115	92.9	70 to 130	0.561	20
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115	108	70 to 130	1.54	20
AY12403	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115	98.3	70 to 130	1.38	20
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23	118	70 to 130	0.691	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY12394

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY12397	Solids, Dissolved	mg/L	4.00	25			2520	55.0	40 to 60		0.199	5

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

Laboratory certification ID: E571114

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CC:



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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY12395

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	J 0.00125	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0115	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0478	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	349	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	J 0.00826	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	J 0.0339	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	2980	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY12395

Sample	Analysis	Units	MB	MB			LCS			Rec			Prec
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046	93.2	70 to 130	0.500	20
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115	98.5	70 to 130	0.774	20
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75	-150	70 to 130	4.28	20
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115	103	70 to 130	4.34	20
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115	102	70 to 130	1.76	20
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15	99.6	70 to 130	0.863	20
AY12403	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115	92.9	70 to 130	0.561	20
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115	104	70 to 130	2.03	20
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115	101	70 to 130	0.900	20
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115	94.0	70 to 130	0.815	20
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115	100	70 to 130	4.27	20
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115	102	70 to 130	1.43	20
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115	108	70 to 130	1.54	20
AY12403	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115	98.3	70 to 130	1.38	20
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23	118	70 to 130	0.691	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY12395

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY12397	Solids, Dissolved	mg/L	4.00	25			2520	55.0	40 to 60		0.199	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AY12396

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	J 0.00125	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0118	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0464	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	369	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	J 0.00838	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	J 0.0335	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	3040	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AY12396

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046		93.2	70 to 130	0.500	20
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115		98.5	70 to 130	0.774	20
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115		100	70 to 130	4.27	20
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115		102	70 to 130	1.43	20
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75		-150	70 to 130	4.28	20
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115		103	70 to 130	4.34	20
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115		102	70 to 130	1.76	20
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15		99.6	70 to 130	0.863	20
AY12403	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115		92.9	70 to 130	0.561	20
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115		104	70 to 130	2.03	20
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115		101	70 to 130	0.900	20
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115		94.0	70 to 130	0.815	20
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115		108	70 to 130	1.54	20
AY12403	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115		98.3	70 to 130	1.38	20
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23		118	70 to 130	0.691	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AY12396

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY12397	Solids, Dissolved	mg/L	4.00	25			2520	55.0	40 to 60		0.199	5

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY12397

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0113	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0478	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	298	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0620	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.0634	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	2510	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY12397

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046		93.2	70 to 130	0.500	20
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115		98.5	70 to 130	0.774	20
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115		100	70 to 130	4.27	20
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115		102	70 to 130	1.43	20
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75		-150	70 to 130	4.28	20
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115		103	70 to 130	4.34	20
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115		108	70 to 130	1.54	20
AY12403	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115		98.3	70 to 130	1.38	20
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23		118	70 to 130	0.691	20
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115		102	70 to 130	1.76	20
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15		99.6	70 to 130	0.863	20
AY12403	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115		92.9	70 to 130	0.561	20
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115		104	70 to 130	2.03	20
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115		101	70 to 130	0.900	20
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115		94.0	70 to 130	0.815	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2019

**Comments:**



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY12397

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY12397	Solids, Dissolved	mg/L	4.00	25			2520	55.0	40 to 60		0.199	5

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Laboratory certification ID: E571114

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Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY12398

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	J 0.00343	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0136	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0463	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	338	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	J 0.00920	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	J 0.0171	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	2340	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY12398

Sample	Analysis	Units	MB	MB			LCS			Rec			Prec
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115	98.5	70 to 130	0.774	20
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046	93.2	70 to 130	0.500	20
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75	-150	70 to 130	4.28	20
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115	103	70 to 130	4.34	20
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115	104	70 to 130	2.03	20
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115	101	70 to 130	0.900	20
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115	94.0	70 to 130	0.815	20
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115	102	70 to 130	1.76	20
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15	99.6	70 to 130	0.863	20
AY12403	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115	92.9	70 to 130	0.561	20
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115	100	70 to 130	4.27	20
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115	102	70 to 130	1.43	20
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115	108	70 to 130	1.54	20
AY12403	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115	98.3	70 to 130	1.38	20
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23	118	70 to 130	0.691	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY12398

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit	
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60			0.401	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY12399

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY12399

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046		93.2	70 to 130	0.500	20
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115		98.5	70 to 130	0.774	20
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115		100	70 to 130	4.27	20
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115		102	70 to 130	1.43	20
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115		102	70 to 130	1.76	20
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15		99.6	70 to 130	0.863	20
AY12403	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115		92.9	70 to 130	0.561	20
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75		-150	70 to 130	4.28	20
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115		103	70 to 130	4.34	20
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115		108	70 to 130	1.54	20
AY12403	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115		98.3	70 to 130	1.38	20
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23		118	70 to 130	0.691	20
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115		104	70 to 130	2.03	20
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115		101	70 to 130	0.900	20
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115		94.0	70 to 130	0.815	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 21-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY12399

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60		0.401	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY12400

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	J 0.00267	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0200	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0472	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		101.5	10.15	50.75	378	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.146	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	J 0.0466	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	3660	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY12400

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046		93.2	70 to 130	0.500	20
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115		98.5	70 to 130	0.774	20
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115		100	70 to 130	4.27	20
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115		102	70 to 130	1.43	20
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75		-150	70 to 130	4.28	20
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115		103	70 to 130	4.34	20
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115		104	70 to 130	2.03	20
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115		101	70 to 130	0.900	20
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115		94.0	70 to 130	0.815	20
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115		108	70 to 130	1.54	20
AY12403	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115		98.3	70 to 130	1.38	20
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23		118	70 to 130	0.691	20
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115		102	70 to 130	1.76	20
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15		99.6	70 to 130	0.863	20
AY12403	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115		92.9	70 to 130	0.561	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY12400

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit	
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60			0.401	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY12401

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0113	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0331	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	364	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.0604	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	J 0.00278	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	2960	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY12401

Sample	Analysis	Units	MB	MB			MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike	MS				Limit	Rec	Limit	Prec		
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046	93.2	70 to 130	0.500	20		
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115	98.5	70 to 130	0.774	20		
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115	102	70 to 130	1.76	20		
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15	99.6	70 to 130	0.863	20		
AY12403	Lead, Total	mg/L	0.0000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115	92.9	70 to 130	0.561	20		
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115	108	70 to 130	1.54	20		
AY12403	Chromium, Total	mg/L	0.0000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115	98.3	70 to 130	1.38	20		
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23	118	70 to 130	0.691	20		
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75	-150	70 to 130	4.28	20		
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115	103	70 to 130	4.34	20		
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115	100	70 to 130	4.27	20		
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115	102	70 to 130	1.43	20		
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115	104	70 to 130	2.03	20		
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115	101	70 to 130	0.900	20		
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115	94.0	70 to 130	0.815	20		

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY12401

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60		0.401	5

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY12402

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0118	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0362	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	325	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0770	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.0543	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	2700	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY12402

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046		93.2	70 to 130	0.500	20
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115		98.5	70 to 130	0.774	20
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115		100	70 to 130	4.27	20
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115		102	70 to 130	1.43	20
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115		104	70 to 130	2.03	20
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115		101	70 to 130	0.900	20
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115		94.0	70 to 130	0.815	20
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115		102	70 to 130	1.76	20
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15		99.6	70 to 130	0.863	20
AY12403	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115		92.9	70 to 130	0.561	20
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115		108	70 to 130	1.54	20
AY12403	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115		98.3	70 to 130	1.38	20
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23		118	70 to 130	0.691	20
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75		-150	70 to 130	4.28	20
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115		103	70 to 130	4.34	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY12402

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60		0.401	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:



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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY12403

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0164	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	0.105	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	398	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.262	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	2540	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** Recovery for Calcium is out of spec. The spike amount is less than 30% of the sample amount. SGC 7/2/18

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY12403

Sample	Analysis	Units	MB	MB			LCS			Rec			Prec
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	
AY12403	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0985	0.0992	0.0962	0.085 to 0.115	98.5	70 to 130	0.774	20
AY12403	Mercury, Total by CVAA	mg/L	0.000102	0.0005	0.004	0.00373	0.00371	0.00381	0.0034 to 0.0046	93.2	70 to 130	0.500	20
AY12403	Calcium, Total	mg/L	0.00292	0.22	5.00	391	375	4.95	4.25 to 5.75	-150	70 to 130	4.28	20
AY12403	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.103	0.0990	0.107	0.085 to 0.115	103	70 to 130	4.34	20
AY12403	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.118	0.116	0.0994	0.085 to 0.115	102	70 to 130	1.76	20
AY12403	Boron, Total	mg/L	-0.000361	0.044	1.00	1.10	1.11	0.955	0.85 to 1.15	99.6	70 to 130	0.863	20
AY12403	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0929	0.0924	0.0934	0.085 to 0.115	92.9	70 to 130	0.561	20
AY12403	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.100	0.0962	0.0986	0.085 to 0.115	100	70 to 130	4.27	20
AY12403	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.101	0.101	0.085 to 0.115	102	70 to 130	1.43	20
AY12403	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.107	0.107	0.085 to 0.115	108	70 to 130	1.54	20
AY12403	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0983	0.0969	0.0991	0.085 to 0.115	98.3	70 to 130	1.38	20
AY12403	Lithium, Total	mg/L	-0.00000208	0.022	0.20	0.497	0.501	0.190	0.17 to 0.23	118	70 to 130	0.691	20
AY12403	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.101	0.0991	0.085 to 0.115	104	70 to 130	2.03	20
AY12403	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.101	0.102	0.102	0.085 to 0.115	101	70 to 130	0.900	20
AY12403	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0940	0.0933	0.103	0.085 to 0.115	94.0	70 to 130	0.815	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** Recovery for Calcium is out of spec. The spike amount is less than 30% of the sample amount. SGC 7/2/18

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY12403

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60			0.401	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** Recovery for Calcium is out of spec. The spike amount is less than 30% of the sample amount. SGC 7/2/18

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY12404

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	J 0.00168	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0148	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	0.102	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	375	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.240	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	2610	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY12404

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115	97.8	70 to 130	0.669	20	
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115	95.2	70 to 130	0.613	20	
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115	104	70 to 130	1.41	20	
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.11	20	
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115	98.5	70 to 130	3.77	20	
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115	94.2	70 to 130	1.05	20	
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115	104	70 to 130	0.0853	20	
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115	105	70 to 130	0.345	20	
AY12413	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115	99.2	70 to 130	0.789	20	
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23	122	70 to 130	0.837	20	
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046	96.0	70 to 130	0.386	20	
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	1.80	20	
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115	108	70 to 130	0.757	20	
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15	100	70 to 130	0.443	20	
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75	157	70 to 130	5.24	20	

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY12404

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60		0.401	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY12405

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0102	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0224	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	166	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	0.00201	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0443	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	J 0.0263	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	J 0.00372	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		125	2380	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY12405

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115	97.8	70 to 130	0.669	20	
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115	104	70 to 130	1.41	20	
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115	95.2	70 to 130	0.613	20	
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.11	20	
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115	104	70 to 130	0.0853	20	
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115	105	70 to 130	0.345	20	
AY12413	Chromium, Total	mg/L	0.0000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115	99.2	70 to 130	0.789	20	
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23	122	70 to 130	0.837	20	
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046	96.0	70 to 130	0.386	20	
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	1.80	20	
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115	108	70 to 130	0.757	20	
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15	100	70 to 130	0.443	20	
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75	157	70 to 130	5.24	20	
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115	98.5	70 to 130	3.77	20	
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115	94.2	70 to 130	1.05	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY12405

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60		0.401	5

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Laboratory certification ID: E571114

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Expiration: June 30, 2019

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CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY12406

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0131	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0251	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	172	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0280	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	J 0.0465	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		100	1500	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY12406

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115	97.8	70 to 130	0.669	20	
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115	104	70 to 130	1.41	20	
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115	95.2	70 to 130	0.613	20	
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.11	20	
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115	98.5	70 to 130	3.77	20	
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115	94.2	70 to 130	1.05	20	
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23	122	70 to 130	0.837	20	
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046	96.0	70 to 130	0.386	20	
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	1.80	20	
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115	108	70 to 130	0.757	20	
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15	100	70 to 130	0.443	20	
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75	157	70 to 130	5.24	20	
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115	104	70 to 130	0.0853	20	
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115	105	70 to 130	0.345	20	
AY12413	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115	99.2	70 to 130	0.789	20	

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Laboratory certification ID: E571114

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**Comments:**

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY12406

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60		0.401	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY12407

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	5/30/2018	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CES	5/30/2018	SM 2540C		1			5/25/18	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY12407

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115	97.8	70 to 130	0.669	20	
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115	104	70 to 130	1.41	20	
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.11	20	
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115	95.2	70 to 130	0.613	20	
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23	122	70 to 130	0.837	20	
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046	96.0	70 to 130	0.386	20	
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	1.80	20	
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115	98.5	70 to 130	3.77	20	
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115	94.2	70 to 130	1.05	20	
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115	108	70 to 130	0.757	20	
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15	100	70 to 130	0.443	20	
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75	157	70 to 130	5.24	20	
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115	104	70 to 130	0.0853	20	
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115	105	70 to 130	0.345	20	
AY12413	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115	99.2	70 to 130	0.789	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 22-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY12407

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY12406	Solids, Dissolved	mg/L	4.00	25			1490	55.0	40 to 60		0.401	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY12408

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	0.00580	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0145	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0757	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		101.5	10.15	50.75	425	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0409	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.266	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		125	3340	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY12408

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			Limit	MB					Limit	Rec	Limit	Prec		
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115		95.2	70 to 130	0.613	20
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115		104	70 to 130	1.41	20
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115		97.8	70 to 130	0.669	20
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115		102	70 to 130	2.11	20
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115		98.5	70 to 130	3.77	20
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115		94.2	70 to 130	1.05	20
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115		104	70 to 130	0.0853	20
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115		105	70 to 130	0.345	20
AY12413	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115		99.2	70 to 130	0.789	20
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115		108	70 to 130	0.757	20
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15		100	70 to 130	0.443	20
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75		157	70 to 130	5.24	20
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23		122	70 to 130	0.837	20
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046		96.0	70 to 130	0.386	20
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115		102	70 to 130	1.80	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY12408

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec
			Limit	Limit			Duplicate	Limit	Limit	Limit
	Filter Completion Date	Date								
AY12412	Solids, Dissolved	mg/L	0.0000	25			3690	58.0	40 to 60	0.408 5

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CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-6 Dup

Laboratory ID Number: AY12409

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	0.00522	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0143	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0735	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		101.5	10.15	50.75	431	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0424	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.267	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		125	3390	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-6 Dup

Laboratory ID Number: AY12409

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115	97.8	70 to 130	0.669	20
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115	95.2	70 to 130	0.613	20
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.11	20
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115	104	70 to 130	1.41	20
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115	98.5	70 to 130	3.77	20
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115	94.2	70 to 130	1.05	20
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23	122	70 to 130	0.837	20
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046	96.0	70 to 130	0.386	20
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	1.80	20
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115	104	70 to 130	0.0853	20
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115	105	70 to 130	0.345	20
AY12413	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115	99.2	70 to 130	0.789	20
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115	108	70 to 130	0.757	20
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15	100	70 to 130	0.443	20
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75	157	70 to 130	5.24	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

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**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-6 Dup

Laboratory ID Number: AY12409

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Rec	Prec	Prec	Limit
								Duplicate	LCS			Limit	Limit			
AY12412	Solids, Dissolved	mg/L	0.0000		25			3690	58.0		40 to 60			0.408		5
	Filter Completion Date	Date														

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY12410

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	J 0.00155	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0135	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0715	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	321	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.129	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		125	2390	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY12410

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115	97.8	70 to 130	0.669	20	
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115	104	70 to 130	1.41	20	
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115	95.2	70 to 130	0.613	20	
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.11	20	
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115	98.5	70 to 130	3.77	20	
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115	94.2	70 to 130	1.05	20	
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115	108	70 to 130	0.757	20	
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15	100	70 to 130	0.443	20	
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75	157	70 to 130	5.24	20	
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23	122	70 to 130	0.837	20	
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046	96.0	70 to 130	0.386	20	
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	1.80	20	
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115	104	70 to 130	0.0853	20	
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115	105	70 to 130	0.345	20	
AY12413	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115	99.2	70 to 130	0.789	20	

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY12410

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY12412	Solids, Dissolved	mg/L	0.0000	25			3690	58.0	40 to 60		0.408	5
	Filter Completion Date	Date										

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:



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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY12411

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/11/2018	EPA 200.8		5.075	0.001	0.005	J 0.00157	mg/L
* Barium, Total	DLJ	6/14/2018	EPA 200.8		5.075	0.002	0.01	0.0137	mg/L
* Beryllium, Total	DLJ	6/11/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0693	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	344	mg/L
* Cadmium, Total	DLJ	6/14/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/14/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/11/2018	EPA 200.8		5.075	0.002	0.01	J 0.00466	mg/L
* Chromium, Total	DLJ	6/11/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.194	mg/L
* Molybdenum, Total	DLJ	6/11/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/11/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/11/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/11/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		125	2750	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY12411

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115	97.8	70 to 130	0.669	20	
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115	104	70 to 130	1.41	20	
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.11	20	
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115	95.2	70 to 130	0.613	20	
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115	98.5	70 to 130	3.77	20	
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115	94.2	70 to 130	1.05	20	
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115	104	70 to 130	0.0853	20	
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115	105	70 to 130	0.345	20	
AY12413	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115	99.2	70 to 130	0.789	20	
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23	122	70 to 130	0.837	20	
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046	96.0	70 to 130	0.386	20	
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	1.80	20	
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115	108	70 to 130	0.757	20	
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15	100	70 to 130	0.443	20	
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75	157	70 to 130	5.24	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY12411

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec
			Limit				Duplicate	Limit	Limit	Limit
	Filter Completion Date	Date								
AY12412	Solids, Dissolved	mg/L	0.0000	25			3690	58.0	40 to 60	0.408 5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY12412

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0138	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0301	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		101.5	10.15	50.75	405	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.103	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		125	3660	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY12412

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115	95.2	70 to 130	0.613	20
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115	104	70 to 130	1.41	20
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115	97.8	70 to 130	0.669	20
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115	104	70 to 130	0.0853	20
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115	105	70 to 130	0.345	20
AY12413	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115	99.2	70 to 130	0.789	20
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115	98.5	70 to 130	3.77	20
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115	94.2	70 to 130	1.05	20
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.11	20
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115	108	70 to 130	0.757	20
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15	100	70 to 130	0.443	20
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75	157	70 to 130	5.24	20
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23	122	70 to 130	0.837	20
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046	96.0	70 to 130	0.386	20
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	1.80	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY12412

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Rec	Prec	Prec	Limit
								Duplicate	LCS			Limit	Limit			
AY12412	Solids, Dissolved	mg/L	0.0000		25			3690	58.0		40 to 60			0.408	5	
	Filter Completion Date	Date														

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY12413

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0107	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0433	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	296	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.0513	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		125	3740	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** Recovery for Calcium is out of spec. The spike amount is less than 30% of the sample amount. SGC 7/2/18

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY12413

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY12413	Molybdenum, Total	mg/L	0.0000276	0.0044	0.10	0.0978	0.0985	0.0962	0.085 to 0.115	97.8	70 to 130	0.669	20	
AY12413	Cadmium, Total	mg/L	0.0000234	0.00066	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.11	20	
AY12413	Thallium, Total	mg/L	0.0000122	0.00044	0.10	0.0952	0.0958	0.103	0.085 to 0.115	95.2	70 to 130	0.613	20	
AY12413	Cobalt, Total	mg/L	0.0000241	0.0044	0.10	0.104	0.103	0.102	0.085 to 0.115	104	70 to 130	1.41	20	
AY12413	Antimony, Total	mg/L	0.0000478	0.00132	0.10	0.104	0.104	0.0991	0.085 to 0.115	104	70 to 130	0.0853	20	
AY12413	Barium, Total	mg/L	0.0000450	0.0044	0.10	0.115	0.115	0.0994	0.085 to 0.115	105	70 to 130	0.345	20	
AY12413	Chromium, Total	mg/L	0.00000321	0.0044	0.10	0.0992	0.0999	0.0991	0.085 to 0.115	99.2	70 to 130	0.789	20	
AY12413	Beryllium, Total	mg/L	0.0000445	0.00132	0.10	0.0985	0.102	0.0986	0.085 to 0.115	98.5	70 to 130	3.77	20	
AY12413	Lead, Total	mg/L	0.00000768	0.0022	0.10	0.0942	0.0952	0.0934	0.085 to 0.115	94.2	70 to 130	1.05	20	
AY12413	Lithium, Total	mg/L	0.000102	0.022	0.20	0.296	0.294	0.186	0.17 to 0.23	122	70 to 130	0.837	20	
AY12413	Mercury, Total by CVAA	mg/L	0.0000989	0.0005	0.004	0.00384	0.00382	0.00385	0.0034 to 0.0046	96.0	70 to 130	0.386	20	
AY12413	Selenium, Total	mg/L	0.0000383	0.0044	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	1.80	20	
AY12413	Arsenic, Total	mg/L	0.0000217	0.0022	0.10	0.108	0.109	0.107	0.085 to 0.115	108	70 to 130	0.757	20	
AY12413	Boron, Total	mg/L	0.00104	0.044	1.00	1.05	1.04	0.954	0.85 to 1.15	100	70 to 130	0.443	20	
AY12413	Calcium, Total	mg/L	0.0360	0.22	5.00	304	320	4.94	4.25 to 5.75	157	70 to 130	5.24	20	

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** Recovery for Calcium is out of spec. The spike amount is less than 30% of the sample amount. SGC 7/2/18



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 23-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY12413

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec
			Limit	Limit			Duplicate	Limit	Limit	Limit
	Filter Completion Date	Date								
AY12416	Solids, Dissolved	mg/L	0.0000	25			1090	58.0	40 to 60	0.640 5

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** Recovery for Calcium is out of spec. The spike amount is less than 30% of the sample amount. SGC 7/2/18

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY12414

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	J 0.00977	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	J 0.00164	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	J 0.0339	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	297	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	0.00459	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.158	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.145	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	J 0.00918	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		125	3680	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY12414

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AY12417	Thallium, Total	mg/L	0.00000414	0.00044	0.10	0.0937	0.0921	0.107	0.085 to 0.115	93.7	70 to 130	1.78	20
AY12417	Lead, Total	mg/L	0.00000499	0.0022	0.10	0.0931	0.0919	0.0977	0.085 to 0.115	93.1	70 to 130	1.31	20
AY12417	Lithium, Total	mg/L	0.00000959	0.022	0.20	0.194	0.190	0.190	0.17 to 0.23	97.2	70 to 130	2.33	20
AY12417	Arsenic, Total	mg/L	0.0000199	0.0022	0.10	0.107	0.105	0.114	0.085 to 0.115	107	70 to 130	2.08	20
AY12417	Chromium, Total	mg/L	-0.00000196	0.0044	0.10	0.0976	0.0973	0.103	0.085 to 0.115	97.6	70 to 130	0.295	20
AY12417	Barium, Total	mg/L	0.0000260	0.0044	0.10	0.105	0.107	0.110	0.085 to 0.115	105	70 to 130	1.34	20
AY12417	Molybdenum, Total	mg/L	0.0000155	0.0044	0.10	0.0954	0.0960	0.0997	0.085 to 0.115	95.4	70 to 130	0.651	20
AY12417	Beryllium, Total	mg/L	0.0000319	0.00132	0.10	0.0988	0.0993	0.0992	0.085 to 0.115	98.8	70 to 130	0.556	20
AY12417	Cobalt, Total	mg/L	0.00000795	0.0044	0.10	0.104	0.102	0.106	0.085 to 0.115	104	70 to 130	1.98	20
AY12417	Boron, Total	mg/L	0.000823	0.044	1.00	0.974	0.952	0.963	0.85 to 1.15	97.4	70 to 130	2.31	20
AY12417	Mercury, Total by CVAA	mg/L	0.0000998	0.0005	0.004	0.00381	0.00386	0.00381	0.0034 to 0.0046	95.2	70 to 130	1.45	20
AY12417	Antimony, Total	mg/L	0.0000313	0.00132	0.10	0.106	0.103	0.109	0.085 to 0.115	106	70 to 130	3.14	20
AY12417	Calcium, Total	mg/L	0.00318	0.22	5.00	5.00	5.09	4.93	4.25 to 5.75	100	70 to 130	1.83	20
AY12417	Selenium, Total	mg/L	0.0000484	0.0044	0.10	0.103	0.100	0.110	0.085 to 0.115	103	70 to 130	2.91	20
AY12417	Cadmium, Total	mg/L	0.00000563	0.00066	0.10	0.105	0.105	0.110	0.085 to 0.115	105	70 to 130	0.238	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY12414

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec
			Limit	Limit			Duplicate	Limit	Limit	Limit
	Filter Completion Date	Date								
AY12416	Solids, Dissolved	mg/L	0.0000	25			1090	58.0	40 to 60	0.640 5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY12415

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	0.0478	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0122	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	0.197	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	349	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0399	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.0819	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		125	3300	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY12415

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec Limit	
			MB	Limit					Limit	Rec	Limit	Prec		
AY12417	Thallium, Total	mg/L	0.00000414	0.00044	0.10	0.0937	0.0921	0.107	0.085 to 0.115		93.7	70 to 130	1.78	20
AY12417	Cadmium, Total	mg/L	0.00000563	0.00066	0.10	0.105	0.105	0.110	0.085 to 0.115		105	70 to 130	0.238	20
AY12417	Arsenic, Total	mg/L	0.0000199	0.0022	0.10	0.107	0.105	0.114	0.085 to 0.115		107	70 to 130	2.08	20
AY12417	Chromium, Total	mg/L	-0.00000196	0.0044	0.10	0.0976	0.0973	0.103	0.085 to 0.115		97.6	70 to 130	0.295	20
AY12417	Barium, Total	mg/L	0.0000260	0.0044	0.10	0.105	0.107	0.110	0.085 to 0.115		105	70 to 130	1.34	20
AY12417	Molybdenum, Total	mg/L	0.0000155	0.0044	0.10	0.0954	0.0960	0.0997	0.085 to 0.115		95.4	70 to 130	0.651	20
AY12417	Antimony, Total	mg/L	0.0000313	0.00132	0.10	0.106	0.103	0.109	0.085 to 0.115		106	70 to 130	3.14	20
AY12417	Calcium, Total	mg/L	0.00318	0.22	5.00	5.00	5.09	4.93	4.25 to 5.75		100	70 to 130	1.83	20
AY12417	Selenium, Total	mg/L	0.0000484	0.0044	0.10	0.103	0.100	0.110	0.085 to 0.115		103	70 to 130	2.91	20
AY12417	Beryllium, Total	mg/L	0.0000319	0.00132	0.10	0.0988	0.0993	0.0992	0.085 to 0.115		98.8	70 to 130	0.556	20
AY12417	Cobalt, Total	mg/L	0.00000795	0.0044	0.10	0.104	0.102	0.106	0.085 to 0.115		104	70 to 130	1.98	20
AY12417	Lead, Total	mg/L	0.00000499	0.0022	0.10	0.0931	0.0919	0.0977	0.085 to 0.115		93.1	70 to 130	1.31	20
AY12417	Lithium, Total	mg/L	0.00000959	0.022	0.20	0.194	0.190	0.190	0.17 to 0.23		97.2	70 to 130	2.33	20
AY12417	Boron, Total	mg/L	0.000823	0.044	1.00	0.974	0.952	0.963	0.85 to 1.15		97.4	70 to 130	2.31	20
AY12417	Mercury, Total by CVAA	mg/L	0.0000998	0.0005	0.004	0.00381	0.00386	0.00381	0.0034 to 0.0046		95.2	70 to 130	1.45	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY12415

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY12416	Solids, Dissolved	mg/L	0.0000	25			1090	58.0	40 to 60		0.640	5
	Filter Completion Date	Date										

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY12416

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	0.0198	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	J 0.00100	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	0.159	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		10.15	1.015	5.075	159	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	J 0.00905	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	0.192	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		50	1100	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY12416

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY12417	Thallium, Total	mg/L	0.00000414	0.00044	0.10	0.0937	0.0921	0.107	0.085 to 0.115		93.7	70 to 130	1.78	20
AY12417	Cadmium, Total	mg/L	0.00000563	0.00066	0.10	0.105	0.105	0.110	0.085 to 0.115		105	70 to 130	0.238	20
AY12417	Arsenic, Total	mg/L	0.0000199	0.0022	0.10	0.107	0.105	0.114	0.085 to 0.115		107	70 to 130	2.08	20
AY12417	Chromium, Total	mg/L	-0.00000196	0.0044	0.10	0.0976	0.0973	0.103	0.085 to 0.115		97.6	70 to 130	0.295	20
AY12417	Boron, Total	mg/L	0.000823	0.044	1.00	0.974	0.952	0.963	0.85 to 1.15		97.4	70 to 130	2.31	20
AY12417	Mercury, Total by CVAA	mg/L	0.0000998	0.0005	0.004	0.00381	0.00386	0.00381	0.0034 to 0.0046		95.2	70 to 130	1.45	20
AY12417	Lead, Total	mg/L	0.00000499	0.0022	0.10	0.0931	0.0919	0.0977	0.085 to 0.115		93.1	70 to 130	1.31	20
AY12417	Lithium, Total	mg/L	0.00000959	0.022	0.20	0.194	0.190	0.190	0.17 to 0.23		97.2	70 to 130	2.33	20
AY12417	Barium, Total	mg/L	0.0000260	0.0044	0.10	0.105	0.107	0.110	0.085 to 0.115		105	70 to 130	1.34	20
AY12417	Molybdenum, Total	mg/L	0.0000155	0.0044	0.10	0.0954	0.0960	0.0997	0.085 to 0.115		95.4	70 to 130	0.651	20
AY12417	Antimony, Total	mg/L	0.0000313	0.00132	0.10	0.106	0.103	0.109	0.085 to 0.115		106	70 to 130	3.14	20
AY12417	Calcium, Total	mg/L	0.00318	0.22	5.00	5.00	5.09	4.93	4.25 to 5.75		100	70 to 130	1.83	20
AY12417	Selenium, Total	mg/L	0.0000484	0.0044	0.10	0.103	0.100	0.110	0.085 to 0.115		103	70 to 130	2.91	20
AY12417	Beryllium, Total	mg/L	0.0000319	0.00132	0.10	0.0988	0.0993	0.0992	0.085 to 0.115		98.8	70 to 130	0.556	20
AY12417	Cobalt, Total	mg/L	0.00000795	0.0044	0.10	0.104	0.102	0.106	0.085 to 0.115		104	70 to 130	1.98	20

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY12416

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
				Limit			Duplicate	LCS	Limit	Rec	Limit	Limit
	Filter Completion Date	Date										
AY12416	Solids, Dissolved	mg/L	0.0000	25			1090	58.0	40 to 60			0.640 5

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Laboratory certification ID: E571114

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Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY12417

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	6/6/2018	EPA 200.7		2.03	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/31/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	6/6/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	6/5/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CES	6/4/2018	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CES	5/29/2018	SM 2540C		1			5/29/18	Date

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY12417

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Limit	
			MB	Limit					Rec	Limit			
AY12417	Cadmium, Total	mg/L	0.00000563	0.00066	0.10	0.105	0.105	0.110	0.085 to 0.115	105	70 to 130	0.238	20
AY12417	Thallium, Total	mg/L	0.00000414	0.00044	0.10	0.0937	0.0921	0.107	0.085 to 0.115	93.7	70 to 130	1.78	20
AY12417	Barium, Total	mg/L	0.0000260	0.0044	0.10	0.105	0.107	0.110	0.085 to 0.115	105	70 to 130	1.34	20
AY12417	Molybdenum, Total	mg/L	0.0000155	0.0044	0.10	0.0954	0.0960	0.0997	0.085 to 0.115	95.4	70 to 130	0.651	20
AY12417	Antimony, Total	mg/L	0.0000313	0.00132	0.10	0.106	0.103	0.109	0.085 to 0.115	106	70 to 130	3.14	20
AY12417	Calcium, Total	mg/L	0.00318	0.22	5.00	5.00	5.09	4.93	4.25 to 5.75	100	70 to 130	1.83	20
AY12417	Selenium, Total	mg/L	0.0000484	0.0044	0.10	0.103	0.100	0.110	0.085 to 0.115	103	70 to 130	2.91	20
AY12417	Beryllium, Total	mg/L	0.0000319	0.00132	0.10	0.0988	0.0993	0.0992	0.085 to 0.115	98.8	70 to 130	0.556	20
AY12417	Cobalt, Total	mg/L	0.00000795	0.0044	0.10	0.104	0.102	0.106	0.085 to 0.115	104	70 to 130	1.98	20
AY12417	Arsenic, Total	mg/L	0.0000199	0.0022	0.10	0.107	0.105	0.114	0.085 to 0.115	107	70 to 130	2.08	20
AY12417	Chromium, Total	mg/L	-0.00000196	0.0044	0.10	0.0976	0.0973	0.103	0.085 to 0.115	97.6	70 to 130	0.295	20
AY12417	Lead, Total	mg/L	0.00000499	0.0022	0.10	0.0931	0.0919	0.0977	0.085 to 0.115	93.1	70 to 130	1.31	20
AY12417	Lithium, Total	mg/L	0.00000959	0.022	0.20	0.194	0.190	0.190	0.17 to 0.23	97.2	70 to 130	2.33	20
AY12417	Boron, Total	mg/L	0.000823	0.044	1.00	0.974	0.952	0.963	0.85 to 1.15	97.4	70 to 130	2.31	20
AY12417	Mercury, Total by CVAA	mg/L	0.0000998	0.0005	0.004	0.00381	0.00386	0.00381	0.0034 to 0.0046	95.2	70 to 130	1.45	20

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Laboratory certification ID: E571114

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 24-May-18  
 Customer ID:  
 Delivery Date: 24-May-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY12417

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY12416	Solids, Dissolved	mg/L	0.0000	25			1090	58.0	40 to 60		0.640	5
	Filter Completion Date	Date										

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

## Definitions



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

Qualifier	Description
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
E	Estimated reported value exceeded calibration range.
J	Reported value is an estimate because concentration is less than reporting limit.
N	Organic constituents tentatively identified. Confirmation is needed.
R	Matrix spike recovery is out of range.
U	Compound was analyzed, but not detected.
P	Precision is out of range.
C	Analyte was verified by re-analysis.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
L	Check standard is outside of the required specification limit.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
F	Water Field Group (WFG) qualifier; see comments for more information



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA **05/24/2018 16:00**

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

Bottles	1	Metals	500 mL	3	TDS	500 mL	5	N/A	N/A	7	N/A	N/A
	2	Hg	250 mL	4	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-13	5/21/18	12:00	3	Groundwater		AY12394
MW-14	05/21/2018	13:13	3	Groundwater		AY12395
MW-14 DUP	05/21/2018	13:13	3	Sample Duplicate		AY12396
MW-15	05/21/2018	14:36	3	Groundwater		AY12397
MW-16	05/21/2018	16:04	3	Groundwater		AY12398
FB-1	05/21/2018	16:25	3	Field Blank		AY12399
MW-17R	05/22/2018	09:46	3	Groundwater		AY12400
MW-18	05/22/2018	11:01	3	Groundwater		AY12401
MW-19	05/22/2018	12:08	3	Groundwater		AY12402
MW-20	05/22/2018	13:18	3	Groundwater		AY12403
MW-11	05/22/2018	14:41	3	Groundwater		AY12404
MW-1	05/22/2018	15:57	3	Groundwater		AY12405
MW-2	05/22/2018	16:56	3	Groundwater		AY12406
FB-2	05/22/2018	17:20	3	Field Blank		AY12407
MW-6	05/23/2018	09:38	3	Groundwater		AY12408
MW-6 DUP	05/23/2018	09:38	3	Sample Duplicate		AY12409
MW-7	05/23/2018	10:50	3	Groundwater		AY12410
MW-8	05/23/2018	11:53	3	Groundwater		AY12411
MW-5	05/23/2018	13:54	3	Groundwater		AY12412
MW-4	05/23/2018	15:17	3	Groundwater		AY12413
MW-3	05/24/2018	10:40	3	Groundwater		AY12414

Relinquished By	Received By	Date/Time
	Sarah Copeland <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o.ou, email=sgcopela@southernco.com, c=US Date: 2018.05.24 16:48:40 -05'00'</small>	05/24/2018 16:48

SmarTroll ID **6496-34170-1-1**  
Turbidity ID **4677-23343-4-2**

All metals and radiological bottles have pH < 2   
Cooler Temp **0.5 degrees C**  
Thermometer ID **5408-27568-2-2**  
pH Strip ID **5881-30155-10-9**







# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA **05/24/2018 16:00**

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

Bottles	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	Anions	250 mL	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments: Radium Duplicate Collected at MW-15 and MW-19. All samples outsourced to Test America for analysis.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	5/21/18	12:00	2	Groundwater		AY12418
MW-14	05/21/2018	13:13	2	Groundwater		AY12419
MW-14 DUP	05/21/2018	13:13	2	Sample Duplicate		AY12420
MW-15	05/21/2018	14:36	4	Groundwater		AY12421
MW-16	05/21/2018	16:04	2	Groundwater		AY12422
FB-1	05/21/2018	16:25	2	Field Blank		AY12423
MW-17R	05/22/2018	09:46	2	Groundwater		AY12424
MW-18	05/22/2018	11:01	2	Groundwater		AY12425
MW-19	05/22/2018	12:08	4	Groundwater		AY12426
MW-20	05/22/2018	13:18	2	Groundwater		AY12427
MW-11	05/22/2018	14:41	2	Groundwater		AY12428
MW-1	05/22/2018	15:57	2	Groundwater		AY12429
MW-2	05/22/2018	16:56	2	Groundwater		AY12430
FB-2	05/22/2018	17:20	2	Field Blank		AY12431
MW-6	05/23/2018	09:38	2	Groundwater		AY12432
MW-6 DUP	05/23/2018	09:38	2	Sample Duplicate		AY12433
MW-7	05/23/2018	10:50	2	Groundwater		AY12434
MW-8	05/23/2018	11:53	2	Groundwater		AY12435
MW-5	05/23/2018	13:54	2	Groundwater		AY12436
MW-4	05/23/2018	15:17	2	Groundwater		AY12437
MW-3	05/24/2018	10:40	2	Groundwater		AY12438

Relinquished By	Received By	Date/Time
	Sarah Copeland <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o.ou, email=sgcopela@southernco.com, c=US Date: 2018.05.24 16:47:38 -05'00'</small>	05/24/2018 16:47

SmarTroll ID **6496-34170-1-1**  
Turbidity ID **4677-23343-4-2**

All metals and radiological bottles have pH < 2   
Cooler Temp **0.5 degrees C**  
Thermometer ID **5408-27568-2-2**  
pH Strip ID **5881-30155-10-9**



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-154380-1

TestAmerica Sample Delivery Group: Gorgas Landfill 1152

Client Project/Site: CCR Plant Gorgas

For:

Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

6/13/2018 2:08:15 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

Review your project  
results through

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

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

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

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# Case Narrative

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

**Job ID: 400-154380-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-154380-1

#### General Chemistry

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AY12435 MW-8 (400-154380-18). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 400849 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AY12418 MW-13 (400-154380-1), AY12419 MW-14 (400-154380-2), AY12420 MW-14 DUP (400-154380-3), AY12421 MW-15 (400-154380-4), AY12422 MW-16 (400-154380-5), AY12425 MW-18 (400-154380-8), AY12428 MW-11 (400-154380-11), AY12432 MW-6 (400-154380-15), AY12433 MW-6 DUP (400-154380-16), AY12437 MW-4 (400-154380-20), AY12438 MW-3 (400-154380-21), AY12439 MW-12 (400-154380-22) and AY12440 MW-10 (400-154380-23). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400865 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

# Detection Summary

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

## Client Sample ID: AY12418 MW-13

## Lab Sample ID: 400-154380-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.6		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2400	F1	450	130	mg/L	90		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12419 MW-14

## Lab Sample ID: 400-154380-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.26		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2500		450	130	mg/L	90		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12420 MW-14 DUP

## Lab Sample ID: 400-154380-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.26		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2500		450	130	mg/L	90		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12421 MW-15

## Lab Sample ID: 400-154380-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6	J	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.35		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2100		430	120	mg/L	85		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12422 MW-16

## Lab Sample ID: 400-154380-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.18		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1700		430	120	mg/L	86		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12423 FB-1

## Lab Sample ID: 400-154380-6

No Detections.

## Client Sample ID: AY12424 MW-17R

## Lab Sample ID: 400-154380-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.17		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		1000	280	mg/L	200		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12425 MW-18

## Lab Sample ID: 400-154380-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.31		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2000		1000	280	mg/L	200		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

## Client Sample ID: AY12426 MW-19

## Lab Sample ID: 400-154380-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.29		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		450	130	mg/L	90		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12427 MW-20

## Lab Sample ID: 400-154380-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2000		450	130	mg/L	90		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12428 MW-11

## Lab Sample ID: 400-154380-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2200	F1	450	130	mg/L	90		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12429 MW-1

## Lab Sample ID: 400-154380-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.16		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2100		450	130	mg/L	90		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12430 MW-2

## Lab Sample ID: 400-154380-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.17		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1200		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12431 FB-2

## Lab Sample ID: 400-154380-14

No Detections.

## Client Sample ID: AY12432 MW-6

## Lab Sample ID: 400-154380-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.6		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2000		1000	280	mg/L	200		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12433 MW-6 DUP

## Lab Sample ID: 400-154380-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.7		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.14		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1700		1000	280	mg/L	200		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

## Client Sample ID: AY12434 MW-7

## Lab Sample ID: 400-154380-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	28		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.18		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1900		430	120	mg/L	85		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12435 MW-8

## Lab Sample ID: 400-154380-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	75		4.0	1.2	mg/L	2		SM 4500 Cl- E	Total/NA
Fluoride	0.21		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2100		450	130	mg/L	90		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12436 MW-5

## Lab Sample ID: 400-154380-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.29		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2400		1000	280	mg/L	200		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12437 MW-4

## Lab Sample ID: 400-154380-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.38		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2400		1000	280	mg/L	200		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12438 MW-3

## Lab Sample ID: 400-154380-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6	J	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.60		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2700		450	130	mg/L	90		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12439 MW-12

## Lab Sample ID: 400-154380-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.15		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		430	120	mg/L	85		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12440 MW-10

## Lab Sample ID: 400-154380-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	560		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY12441 EB-1

## Lab Sample ID: 400-154380-24

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



# Method Summary

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

Method	Method Description	Protocol	Laboratory
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN

**Protocol References:**

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

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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- 13
- 14

# Sample Summary

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-154380-1	AY12418 MW-13	Water	05/21/18 12:00	05/30/18 10:17
400-154380-2	AY12419 MW-14	Water	05/21/18 13:13	05/30/18 10:17
400-154380-3	AY12420 MW-14 DUP	Water	05/21/18 13:13	05/30/18 10:17
400-154380-4	AY12421 MW-15	Water	05/21/18 14:36	05/30/18 10:17
400-154380-5	AY12422 MW-16	Water	05/21/18 16:04	05/30/18 10:17
400-154380-6	AY12423 FB-1	Water	05/21/18 16:25	05/30/18 10:17
400-154380-7	AY12424 MW-17R	Water	05/22/18 09:46	05/30/18 10:17
400-154380-8	AY12425 MW-18	Water	05/22/18 11:01	05/30/18 10:17
400-154380-9	AY12426 MW-19	Water	05/22/18 12:08	05/30/18 10:17
400-154380-10	AY12427 MW-20	Water	05/22/18 13:18	05/30/18 10:17
400-154380-11	AY12428 MW-11	Water	05/22/18 14:41	05/30/18 10:17
400-154380-12	AY12429 MW-1	Water	05/22/18 15:57	05/30/18 10:17
400-154380-13	AY12430 MW-2	Water	05/22/18 16:56	05/30/18 10:17
400-154380-14	AY12431 FB-2	Water	05/22/18 17:20	05/30/18 10:17
400-154380-15	AY12432 MW-6	Water	05/23/18 09:38	05/30/18 10:17
400-154380-16	AY12433 MW-6 DUP	Water	05/23/18 09:38	05/30/18 10:17
400-154380-17	AY12434 MW-7	Water	05/23/18 10:50	05/30/18 10:17
400-154380-18	AY12435 MW-8	Water	05/23/18 11:53	05/30/18 10:17
400-154380-19	AY12436 MW-5	Water	05/23/18 13:54	05/30/18 10:17
400-154380-20	AY12437 MW-4	Water	05/23/18 15:17	05/30/18 10:17
400-154380-21	AY12438 MW-3	Water	05/24/18 10:40	05/30/18 10:17
400-154380-22	AY12439 MW-12	Water	05/24/18 12:22	05/30/18 10:17
400-154380-23	AY12440 MW-10	Water	05/24/18 13:52	05/30/18 10:17
400-154380-24	AY12441 EB-1	Water	05/24/18 14:30	05/30/18 10:17

# Client Sample Results

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12418 MW-13**

**Lab Sample ID: 400-154380-1**

Date Collected: 05/21/18 12:00

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.6		2.0	0.60	mg/L			06/11/18 08:43	1
Fluoride	0.22		0.10	0.032	mg/L			05/31/18 10:59	1
Sulfate	2400	F1	450	130	mg/L			06/12/18 11:49	90

**Client Sample ID: AY12419 MW-14**

**Lab Sample ID: 400-154380-2**

Date Collected: 05/21/18 13:13

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		2.0	0.60	mg/L			06/11/18 08:43	1
Fluoride	0.26		0.10	0.032	mg/L			05/31/18 11:05	1
Sulfate	2500		450	130	mg/L			06/12/18 11:49	90

**Client Sample ID: AY12420 MW-14 DUP**

**Lab Sample ID: 400-154380-3**

Date Collected: 05/21/18 13:13

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			06/11/18 08:43	1
Fluoride	0.26		0.10	0.032	mg/L			05/31/18 11:08	1
Sulfate	2500		450	130	mg/L			06/12/18 11:53	90

**Client Sample ID: AY12421 MW-15**

**Lab Sample ID: 400-154380-4**

Date Collected: 05/21/18 14:36

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6	J	2.0	0.60	mg/L			06/11/18 08:46	1
Fluoride	0.35		0.10	0.032	mg/L			05/31/18 11:10	1
Sulfate	2100		430	120	mg/L			06/12/18 11:53	85

**Client Sample ID: AY12422 MW-16**

**Lab Sample ID: 400-154380-5**

Date Collected: 05/21/18 16:04

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.1		2.0	0.60	mg/L			06/11/18 08:46	1
Fluoride	0.18		0.10	0.032	mg/L			05/31/18 11:12	1
Sulfate	1700		430	120	mg/L			06/12/18 11:53	86

# Client Sample Results

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12423 FB-1**

**Lab Sample ID: 400-154380-6**

Date Collected: 05/21/18 16:25

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			06/11/18 08:46	1
Fluoride	<0.032		0.10	0.032	mg/L			05/31/18 11:16	1
Sulfate	<1.4		5.0	1.4	mg/L			06/12/18 09:50	1

**Client Sample ID: AY12424 MW-17R**

**Lab Sample ID: 400-154380-7**

Date Collected: 05/22/18 09:46

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.0		2.0	0.60	mg/L			06/11/18 08:46	1
Fluoride	0.17		0.10	0.032	mg/L			05/31/18 11:18	1
Sulfate	2300		1000	280	mg/L			06/12/18 13:36	200

**Client Sample ID: AY12425 MW-18**

**Lab Sample ID: 400-154380-8**

Date Collected: 05/22/18 11:01

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.1		2.0	0.60	mg/L			06/11/18 08:46	1
Fluoride	0.31		0.10	0.032	mg/L			05/31/18 11:20	1
Sulfate	2000		1000	280	mg/L			06/12/18 13:36	200

**Client Sample ID: AY12426 MW-19**

**Lab Sample ID: 400-154380-9**

Date Collected: 05/22/18 12:08

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.9		2.0	0.60	mg/L			06/11/18 08:46	1
Fluoride	0.29		0.10	0.032	mg/L			05/31/18 11:29	1
Sulfate	2300		450	130	mg/L			06/12/18 12:25	90

**Client Sample ID: AY12427 MW-20**

**Lab Sample ID: 400-154380-10**

Date Collected: 05/22/18 13:18

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24		2.0	0.60	mg/L			06/11/18 08:46	1
Fluoride	0.13		0.10	0.032	mg/L			05/31/18 11:33	1
Sulfate	2000		450	130	mg/L			06/12/18 12:25	90

**Client Sample ID: AY12428 MW-11**

**Lab Sample ID: 400-154380-11**

Date Collected: 05/22/18 14:41

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24		2.0	0.60	mg/L			06/11/18 08:46	1

TestAmerica Pensacola

# Client Sample Results

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12428 MW-11**

**Lab Sample ID: 400-154380-11**

Date Collected: 05/22/18 14:41

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.10		0.10	0.032	mg/L			05/31/18 11:43	1
Sulfate	2200	F1	450	130	mg/L			06/12/18 11:58	90

**Client Sample ID: AY12429 MW-1**

**Lab Sample ID: 400-154380-12**

Date Collected: 05/22/18 15:57

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		2.0	0.60	mg/L			06/11/18 08:53	1
Fluoride	0.16		0.10	0.032	mg/L			05/31/18 11:46	1
Sulfate	2100		450	130	mg/L			06/12/18 12:30	90

**Client Sample ID: AY12430 MW-2**

**Lab Sample ID: 400-154380-13**

Date Collected: 05/22/18 16:56

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.2		2.0	0.60	mg/L			06/11/18 08:53	1
Fluoride	0.17		0.10	0.032	mg/L			05/31/18 11:52	1
Sulfate	1200		250	70	mg/L			06/12/18 12:30	50

**Client Sample ID: AY12431 FB-2**

**Lab Sample ID: 400-154380-14**

Date Collected: 05/22/18 17:20

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			06/11/18 08:53	1
Fluoride	<0.032		0.10	0.032	mg/L			05/31/18 11:50	1
Sulfate	<1.4		5.0	1.4	mg/L			06/12/18 09:50	1

**Client Sample ID: AY12432 MW-6**

**Lab Sample ID: 400-154380-15**

Date Collected: 05/23/18 09:38

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.6		2.0	0.60	mg/L			06/11/18 08:53	1
Fluoride	0.13		0.10	0.032	mg/L			05/31/18 13:26	1
Sulfate	2000		1000	280	mg/L			06/12/18 13:36	200

**Client Sample ID: AY12433 MW-6 DUP**

**Lab Sample ID: 400-154380-16**

Date Collected: 05/23/18 09:38

Matrix: Water

Date Received: 05/30/18 10:17

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		2.0	0.60	mg/L			06/11/18 08:53	1
Fluoride	0.14		0.10	0.032	mg/L			05/31/18 13:32	1

TestAmerica Pensacola

# Client Sample Results

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

**Client Sample ID: AY12433 MW-6 DUP**

**Lab Sample ID: 400-154380-16**

Date Collected: 05/23/18 09:38

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1700		1000	280	mg/L			06/12/18 13:36	200

**Client Sample ID: AY12434 MW-7**

**Lab Sample ID: 400-154380-17**

Date Collected: 05/23/18 10:50

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28		2.0	0.60	mg/L			06/11/18 08:53	1
Fluoride	0.18		0.10	0.032	mg/L			05/31/18 13:34	1
Sulfate	1900		430	120	mg/L			06/12/18 12:30	85

**Client Sample ID: AY12435 MW-8**

**Lab Sample ID: 400-154380-18**

Date Collected: 05/23/18 11:53

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75		4.0	1.2	mg/L			06/11/18 09:11	2
Fluoride	0.21		0.10	0.032	mg/L			05/31/18 13:36	1
Sulfate	2100		450	130	mg/L			06/12/18 12:30	90

**Client Sample ID: AY12436 MW-5**

**Lab Sample ID: 400-154380-19**

Date Collected: 05/23/18 13:54

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.0		2.0	0.60	mg/L			06/11/18 08:53	1
Fluoride	0.29		0.10	0.032	mg/L			05/31/18 13:38	1
Sulfate	2400		1000	280	mg/L			06/12/18 13:40	200

**Client Sample ID: AY12437 MW-4**

**Lab Sample ID: 400-154380-20**

Date Collected: 05/23/18 15:17

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			06/11/18 08:53	1
Fluoride	0.38		0.10	0.032	mg/L			05/31/18 13:40	1
Sulfate	2400		1000	280	mg/L			06/12/18 13:40	200

**Client Sample ID: AY12438 MW-3**

**Lab Sample ID: 400-154380-21**

Date Collected: 05/24/18 10:40

Matrix: Water

Date Received: 05/30/18 10:17

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6	J	2.0	0.60	mg/L			06/11/18 10:24	1
Fluoride	0.60		0.10	0.032	mg/L			05/31/18 13:45	1
Sulfate	2700		450	130	mg/L			06/12/18 15:38	90

TestAmerica Pensacola

# Client Sample Results

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

**Client Sample ID: AY12439 MW-12**

**Date Collected: 05/24/18 12:22**

**Date Received: 05/30/18 10:17**

**Lab Sample ID: 400-154380-22**

**Matrix: Water**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.1		2.0	0.60	mg/L			06/11/18 10:24	1
Fluoride	0.15		0.10	0.032	mg/L			05/31/18 13:47	1
Sulfate	2300		430	120	mg/L			06/12/18 15:38	85

**Client Sample ID: AY12440 MW-10**

**Date Collected: 05/24/18 13:52**

**Date Received: 05/30/18 10:17**

**Lab Sample ID: 400-154380-23**

**Matrix: Water**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.0		2.0	0.60	mg/L			06/11/18 10:24	1
Fluoride	0.13		0.10	0.032	mg/L			05/31/18 13:55	1
Sulfate	560		250	70	mg/L			06/12/18 15:16	50

**Client Sample ID: AY12441 EB-1**

**Date Collected: 05/24/18 14:30**

**Date Received: 05/30/18 10:17**

**Lab Sample ID: 400-154380-24**

**Matrix: Water**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			06/11/18 10:27	1
Fluoride	<0.032		0.10	0.032	mg/L			05/31/18 14:01	1
Sulfate	<1.4		5.0	1.4	mg/L			06/12/18 14:48	1

# Definitions/Glossary

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

## Qualifiers

### General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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



# Lab Chronicle

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12418 MW-13**

**Lab Sample ID: 400-154380-1**

**Date Collected: 05/21/18 12:00**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 10:59	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	400849	06/12/18 11:49	BJB	TAL PEN

**Client Sample ID: AY12419 MW-14**

**Lab Sample ID: 400-154380-2**

**Date Collected: 05/21/18 13:13**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:05	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	400849	06/12/18 11:49	BJB	TAL PEN

**Client Sample ID: AY12420 MW-14 DUP**

**Lab Sample ID: 400-154380-3**

**Date Collected: 05/21/18 13:13**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:08	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	400849	06/12/18 11:53	BJB	TAL PEN

**Client Sample ID: AY12421 MW-15**

**Lab Sample ID: 400-154380-4**

**Date Collected: 05/21/18 14:36**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:10	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		85	400849	06/12/18 11:53	BJB	TAL PEN

**Client Sample ID: AY12422 MW-16**

**Lab Sample ID: 400-154380-5**

**Date Collected: 05/21/18 16:04**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:12	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		86	400849	06/12/18 11:53	BJB	TAL PEN

# Lab Chronicle

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

**Client Sample ID: AY12423 FB-1**

**Lab Sample ID: 400-154380-6**

**Date Collected: 05/21/18 16:25**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:16	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	400849	06/12/18 09:50	BJB	TAL PEN

**Client Sample ID: AY12424 MW-17R**

**Lab Sample ID: 400-154380-7**

**Date Collected: 05/22/18 09:46**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:18	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		200	400849	06/12/18 13:36	BJB	TAL PEN

**Client Sample ID: AY12425 MW-18**

**Lab Sample ID: 400-154380-8**

**Date Collected: 05/22/18 11:01**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:20	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		200	400849	06/12/18 13:36	BJB	TAL PEN

**Client Sample ID: AY12426 MW-19**

**Lab Sample ID: 400-154380-9**

**Date Collected: 05/22/18 12:08**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:29	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	400849	06/12/18 12:25	BJB	TAL PEN

**Client Sample ID: AY12427 MW-20**

**Lab Sample ID: 400-154380-10**

**Date Collected: 05/22/18 13:18**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:33	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	400849	06/12/18 12:25	BJB	TAL PEN

# Lab Chronicle

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12428 MW-11**

**Lab Sample ID: 400-154380-11**

**Date Collected: 05/22/18 14:41**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:43	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	400849	06/12/18 11:58	BJB	TAL PEN

**Client Sample ID: AY12429 MW-1**

**Lab Sample ID: 400-154380-12**

**Date Collected: 05/22/18 15:57**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:46	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	400849	06/12/18 12:30	BJB	TAL PEN

**Client Sample ID: AY12430 MW-2**

**Lab Sample ID: 400-154380-13**

**Date Collected: 05/22/18 16:56**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:52	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	400849	06/12/18 12:30	BJB	TAL PEN

**Client Sample ID: AY12431 FB-2**

**Lab Sample ID: 400-154380-14**

**Date Collected: 05/22/18 17:20**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399543	05/31/18 11:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	400849	06/12/18 09:50	BJB	TAL PEN

**Client Sample ID: AY12432 MW-6**

**Lab Sample ID: 400-154380-15**

**Date Collected: 05/23/18 09:38**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 13:26	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		200	400849	06/12/18 13:36	BJB	TAL PEN

# Lab Chronicle

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12433 MW-6 DUP**

**Lab Sample ID: 400-154380-16**

**Date Collected: 05/23/18 09:38**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 13:32	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		200	400849	06/12/18 13:36	BJB	TAL PEN

**Client Sample ID: AY12434 MW-7**

**Lab Sample ID: 400-154380-17**

**Date Collected: 05/23/18 10:50**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 13:34	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		85	400849	06/12/18 12:30	BJB	TAL PEN

**Client Sample ID: AY12435 MW-8**

**Lab Sample ID: 400-154380-18**

**Date Collected: 05/23/18 11:53**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		2	400641	06/11/18 09:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 13:36	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	400849	06/12/18 12:30	BJB	TAL PEN

**Client Sample ID: AY12436 MW-5**

**Lab Sample ID: 400-154380-19**

**Date Collected: 05/23/18 13:54**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 13:38	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		200	400849	06/12/18 13:40	BJB	TAL PEN

**Client Sample ID: AY12437 MW-4**

**Lab Sample ID: 400-154380-20**

**Date Collected: 05/23/18 15:17**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400641	06/11/18 08:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 13:40	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		200	400849	06/12/18 13:40	BJB	TAL PEN

# Lab Chronicle

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

**Client Sample ID: AY12438 MW-3**

**Lab Sample ID: 400-154380-21**

**Date Collected: 05/24/18 10:40**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400672	06/11/18 10:24	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 13:45	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	400865	06/12/18 15:38	BJB	TAL PEN

**Client Sample ID: AY12439 MW-12**

**Lab Sample ID: 400-154380-22**

**Date Collected: 05/24/18 12:22**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400672	06/11/18 10:24	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 13:47	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		85	400865	06/12/18 15:38	BJB	TAL PEN

**Client Sample ID: AY12440 MW-10**

**Lab Sample ID: 400-154380-23**

**Date Collected: 05/24/18 13:52**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400672	06/11/18 10:24	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 13:55	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	400865	06/12/18 15:16	BJB	TAL PEN

**Client Sample ID: AY12441 EB-1**

**Lab Sample ID: 400-154380-24**

**Date Collected: 05/24/18 14:30**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	400672	06/11/18 10:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	399578	05/31/18 14:01	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	400865	06/12/18 14:48	BJB	TAL PEN

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# QC Association Summary

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

## General Chemistry

### Analysis Batch: 399543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-1	AY12418 MW-13	Total/NA	Water	SM 4500 F C	
400-154380-2	AY12419 MW-14	Total/NA	Water	SM 4500 F C	
400-154380-3	AY12420 MW-14 DUP	Total/NA	Water	SM 4500 F C	
400-154380-4	AY12421 MW-15	Total/NA	Water	SM 4500 F C	
400-154380-5	AY12422 MW-16	Total/NA	Water	SM 4500 F C	
400-154380-6	AY12423 FB-1	Total/NA	Water	SM 4500 F C	
400-154380-7	AY12424 MW-17R	Total/NA	Water	SM 4500 F C	
400-154380-8	AY12425 MW-18	Total/NA	Water	SM 4500 F C	
400-154380-9	AY12426 MW-19	Total/NA	Water	SM 4500 F C	
400-154380-10	AY12427 MW-20	Total/NA	Water	SM 4500 F C	
400-154380-11	AY12428 MW-11	Total/NA	Water	SM 4500 F C	
400-154380-12	AY12429 MW-1	Total/NA	Water	SM 4500 F C	
400-154380-13	AY12430 MW-2	Total/NA	Water	SM 4500 F C	
400-154380-14	AY12431 FB-2	Total/NA	Water	SM 4500 F C	
MB 400-399543/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-399543/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-154380-1 MS	AY12418 MW-13	Total/NA	Water	SM 4500 F C	
400-154380-1 MSD	AY12418 MW-13	Total/NA	Water	SM 4500 F C	
400-154380-9 DU	AY12426 MW-19	Total/NA	Water	SM 4500 F C	

### Analysis Batch: 399578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-15	AY12432 MW-6	Total/NA	Water	SM 4500 F C	
400-154380-16	AY12433 MW-6 DUP	Total/NA	Water	SM 4500 F C	
400-154380-17	AY12434 MW-7	Total/NA	Water	SM 4500 F C	
400-154380-18	AY12435 MW-8	Total/NA	Water	SM 4500 F C	
400-154380-19	AY12436 MW-5	Total/NA	Water	SM 4500 F C	
400-154380-20	AY12437 MW-4	Total/NA	Water	SM 4500 F C	
400-154380-21	AY12438 MW-3	Total/NA	Water	SM 4500 F C	
400-154380-22	AY12439 MW-12	Total/NA	Water	SM 4500 F C	
400-154380-23	AY12440 MW-10	Total/NA	Water	SM 4500 F C	
400-154380-24	AY12441 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-399578/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-399578/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-154380-15 MS	AY12432 MW-6	Total/NA	Water	SM 4500 F C	
400-154380-15 MSD	AY12432 MW-6	Total/NA	Water	SM 4500 F C	
400-154380-23 DU	AY12440 MW-10	Total/NA	Water	SM 4500 F C	

### Analysis Batch: 400641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-1	AY12418 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-154380-2	AY12419 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-154380-3	AY12420 MW-14 DUP	Total/NA	Water	SM 4500 Cl- E	
400-154380-4	AY12421 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-154380-5	AY12422 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-154380-6	AY12423 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-154380-7	AY12424 MW-17R	Total/NA	Water	SM 4500 Cl- E	
400-154380-8	AY12425 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-154380-9	AY12426 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-154380-10	AY12427 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-154380-11	AY12428 MW-11	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Pensacola

# QC Association Summary

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

## General Chemistry (Continued)

### Analysis Batch: 400641 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-12	AY12429 MW-1	Total/NA	Water	SM 4500 Cl- E	
400-154380-13	AY12430 MW-2	Total/NA	Water	SM 4500 Cl- E	
400-154380-14	AY12431 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-154380-15	AY12432 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-154380-16	AY12433 MW-6 DUP	Total/NA	Water	SM 4500 Cl- E	
400-154380-17	AY12434 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-154380-18	AY12435 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-154380-19	AY12436 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-154380-20	AY12437 MW-4	Total/NA	Water	SM 4500 Cl- E	
MB 400-400641/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-400641/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-400641/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-154380-2 MS	AY12419 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-154380-2 MSD	AY12419 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-154380-11 MS	AY12428 MW-11	Total/NA	Water	SM 4500 Cl- E	
400-154380-11 MSD	AY12428 MW-11	Total/NA	Water	SM 4500 Cl- E	

### Analysis Batch: 400672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-21	AY12438 MW-3	Total/NA	Water	SM 4500 Cl- E	
400-154380-22	AY12439 MW-12	Total/NA	Water	SM 4500 Cl- E	
400-154380-23	AY12440 MW-10	Total/NA	Water	SM 4500 Cl- E	
400-154380-24	AY12441 EB-1	Total/NA	Water	SM 4500 Cl- E	
MB 400-400672/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-400672/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-400672/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-154380-21 MS	AY12438 MW-3	Total/NA	Water	SM 4500 Cl- E	
400-154380-21 MSD	AY12438 MW-3	Total/NA	Water	SM 4500 Cl- E	

### Analysis Batch: 400849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-1	AY12418 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-154380-2	AY12419 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-154380-3	AY12420 MW-14 DUP	Total/NA	Water	SM 4500 SO4 E	
400-154380-4	AY12421 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-154380-5	AY12422 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-154380-6	AY12423 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-154380-7	AY12424 MW-17R	Total/NA	Water	SM 4500 SO4 E	
400-154380-8	AY12425 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-154380-9	AY12426 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-154380-10	AY12427 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-154380-11	AY12428 MW-11	Total/NA	Water	SM 4500 SO4 E	
400-154380-12	AY12429 MW-1	Total/NA	Water	SM 4500 SO4 E	
400-154380-13	AY12430 MW-2	Total/NA	Water	SM 4500 SO4 E	
400-154380-14	AY12431 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-154380-15	AY12432 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-154380-16	AY12433 MW-6 DUP	Total/NA	Water	SM 4500 SO4 E	
400-154380-17	AY12434 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-154380-18	AY12435 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-154380-19	AY12436 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-154380-20	AY12437 MW-4	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

# QC Association Summary

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

TestAmerica Job ID: 400-154380-1  
SDG: Gorgas Landfill 1152

## General Chemistry (Continued)

### Analysis Batch: 400849 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-400849/15	Method Blank	Total/NA	Water	SM 4500 SO4 E	
MB 400-400849/24	Method Blank	Total/NA	Water	SM 4500 SO4 E	
MB 400-400849/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-400849/16	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
LCS 400-400849/25	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
LCS 400-400849/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-400849/21	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-400849/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-154380-1 MS	AY12418 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-154380-1 MSD	AY12418 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-154380-11 MS	AY12428 MW-11	Total/NA	Water	SM 4500 SO4 E	
400-154380-11 MSD	AY12428 MW-11	Total/NA	Water	SM 4500 SO4 E	

### Analysis Batch: 400865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-21	AY12438 MW-3	Total/NA	Water	SM 4500 SO4 E	
400-154380-22	AY12439 MW-12	Total/NA	Water	SM 4500 SO4 E	
400-154380-23	AY12440 MW-10	Total/NA	Water	SM 4500 SO4 E	
400-154380-24	AY12441 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-400865/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-400865/45	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-400865/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-154404-B-5 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-154404-B-5 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-154404-B-7 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-154404-B-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	



# QC Sample Results

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 400-400641/6**  
**Matrix: Water**  
**Analysis Batch: 400641**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			06/11/18 08:43	1

**Lab Sample ID: LCS 400-400641/7**  
**Matrix: Water**  
**Analysis Batch: 400641**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	30.6		mg/L		102	90 - 110

**Lab Sample ID: MRL 400-400641/3**  
**Matrix: Water**  
**Analysis Batch: 400641**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	2.06		mg/L		103	50 - 150

**Lab Sample ID: 400-154380-2 MS**  
**Matrix: Water**  
**Analysis Batch: 400641**

**Client Sample ID: AY12419 MW-14**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.3		10.0	13.6		mg/L		113	73 - 120

**Lab Sample ID: 400-154380-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 400641**

**Client Sample ID: AY12419 MW-14**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	2.3		10.0	13.7		mg/L		114	73 - 120	1	8

**Lab Sample ID: 400-154380-11 MS**  
**Matrix: Water**  
**Analysis Batch: 400641**

**Client Sample ID: AY12428 MW-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	24		10.0	33.1		mg/L		89	73 - 120

**Lab Sample ID: 400-154380-11 MSD**  
**Matrix: Water**  
**Analysis Batch: 400641**

**Client Sample ID: AY12428 MW-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	24		10.0	32.9		mg/L		87	73 - 120	1	8

**Lab Sample ID: MB 400-400672/6**  
**Matrix: Water**  
**Analysis Batch: 400672**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			06/11/18 10:24	1

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# QC Sample Results

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

**Lab Sample ID: LCS 400-400672/7**  
**Matrix: Water**  
**Analysis Batch: 400672**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.0		mg/L		103	90 - 110

**Lab Sample ID: MRL 400-400672/3**  
**Matrix: Water**  
**Analysis Batch: 400672**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.50	J	mg/L		75	50 - 150

**Lab Sample ID: 400-154380-21 MS**  
**Matrix: Water**  
**Analysis Batch: 400672**

**Client Sample ID: AY12438 MW-3**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.6	J	10.0	11.9		mg/L		103	73 - 120

**Lab Sample ID: 400-154380-21 MSD**  
**Matrix: Water**  
**Analysis Batch: 400672**

**Client Sample ID: AY12438 MW-3**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.6	J	10.0	12.0		mg/L		104	73 - 120	0	8

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 400-399543/3**  
**Matrix: Water**  
**Analysis Batch: 399543**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			05/31/18 10:46	1

**Lab Sample ID: LCS 400-399543/4**  
**Matrix: Water**  
**Analysis Batch: 399543**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.72		mg/L		93	90 - 110

**Lab Sample ID: 400-154380-1 MS**  
**Matrix: Water**  
**Analysis Batch: 399543**

**Client Sample ID: AY12418 MW-13**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.22		1.00	1.12		mg/L		90	75 - 125

# QC Sample Results

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: 400-154380-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 399543**

**Client Sample ID: AY12418 MW-13**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.22		1.00	1.12		mg/L		90	75 - 125	0	4

**Lab Sample ID: 400-154380-9 DU**  
**Matrix: Water**  
**Analysis Batch: 399543**

**Client Sample ID: AY12426 MW-19**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.29		0.290		mg/L		0	4

**Lab Sample ID: MB 400-399578/3**  
**Matrix: Water**  
**Analysis Batch: 399578**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			05/31/18 13:13	1

**Lab Sample ID: LCS 400-399578/4**  
**Matrix: Water**  
**Analysis Batch: 399578**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.72		mg/L		93	90 - 110

**Lab Sample ID: 400-154380-15 MS**  
**Matrix: Water**  
**Analysis Batch: 399578**

**Client Sample ID: AY12432 MW-6**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.13		1.00	1.02		mg/L		89	75 - 125

**Lab Sample ID: 400-154380-15 MSD**  
**Matrix: Water**  
**Analysis Batch: 399578**

**Client Sample ID: AY12432 MW-6**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.13		1.00	1.02		mg/L		89	75 - 125	0	4

**Lab Sample ID: 400-154380-23 DU**  
**Matrix: Water**  
**Analysis Batch: 399578**

**Client Sample ID: AY12440 MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.13		0.130		mg/L		0	4

# QC Sample Results

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-400849/15**  
**Matrix: Water**  
**Analysis Batch: 400849**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			06/12/18 08:02	1

**Lab Sample ID: MB 400-400849/24**  
**Matrix: Water**  
**Analysis Batch: 400849**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			06/12/18 08:56	1

**Lab Sample ID: MB 400-400849/6**  
**Matrix: Water**  
**Analysis Batch: 400849**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			06/12/18 07:34	1

**Lab Sample ID: LCS 400-400849/25**  
**Matrix: Water**  
**Analysis Batch: 400849**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	16.4		mg/L		109	90 - 110

**Lab Sample ID: MRL 400-400849/21**  
**Matrix: Water**  
**Analysis Batch: 400849**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	7.03		mg/L		141	50 - 150

**Lab Sample ID: 400-154380-1 MS**  
**Matrix: Water**  
**Analysis Batch: 400849**

**Client Sample ID: AY12418 MW-13**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2400	F1	900	2290	F1	mg/L		-13	77 - 128

**Lab Sample ID: 400-154380-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 400849**

**Client Sample ID: AY12418 MW-13**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	2400	F1	900	2230	F1	mg/L		-19	77 - 128	3	5

**Lab Sample ID: 400-154380-11 MS**  
**Matrix: Water**  
**Analysis Batch: 400849**

**Client Sample ID: AY12428 MW-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2200	F1	900	2130	F1	mg/L		-3	77 - 128

TestAmerica Pensacola

# QC Sample Results

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

**Lab Sample ID: 400-154380-11 MSD**  
**Matrix: Water**  
**Analysis Batch: 400849**

**Client Sample ID: AY12428 MW-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	2200	F1	900	2140	F1	mg/L		-2	77 - 128	1	5

**Lab Sample ID: MB 400-400865/6**  
**Matrix: Water**  
**Analysis Batch: 400865**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			06/12/18 14:26	1

**Lab Sample ID: LCS 400-400865/45**  
**Matrix: Water**  
**Analysis Batch: 400865**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	15.0		mg/L		100	90 - 110

**Lab Sample ID: MRL 400-400865/3**  
**Matrix: Water**  
**Analysis Batch: 400865**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	5.49		mg/L		110	50 - 150

**Lab Sample ID: 400-154404-B-5 MS**  
**Matrix: Water**  
**Analysis Batch: 400865**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	260	F1	100	272	F1	mg/L		9	77 - 128

**Lab Sample ID: 400-154404-B-5 MSD**  
**Matrix: Water**  
**Analysis Batch: 400865**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	260	F1	100	278	F1	mg/L		15	77 - 128	2	5

**Lab Sample ID: 400-154404-B-7 MS**  
**Matrix: Water**  
**Analysis Batch: 400865**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4	F1	10.0	20.3	F1	mg/L		203	77 - 128

**Lab Sample ID: 400-154404-B-7 MSD**  
**Matrix: Water**  
**Analysis Batch: 400865**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4	F1	10.0	20.2	F1	mg/L		202	77 - 128	0	5

TestAmerica Pensacola

**Chain of Custody Record**

<b>Client Information</b> Client Contact: Ben Rothschild Phone: Sarah Copeland Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Callera State, Zip: AL, 35040 Phone: 205-664-6121 (Tel) Email: sgcopela@southernco.com Project Name: CCR Site: Gorgas Landfill 1152		<b>Lab P.I.:</b> Whitmire, Chyenne R E-Mail: chyenmire.whitmire@testamericainc.com Carrier Tracking Note:		COC No: 400-56525-24537.1 Page: Page 1 of 2 Job #: 154380		
<b>Analysis Requested</b> Due Date Requested: TAT Requested (days): Routine PO #: WO #: Project #: 40007143 SSOW#:		Total Number of Containers:				
<b>Sample Identification</b>		<b>Special Instructions/Note:</b>				
AY12418	5/21/18	1200	G	Water	2	MM-13
AY12419	5/21/18	1313	G	Water	2	MM-14
AY12420	5/21/18	1313	G	Water	2	MM-14 Dup (Sample Duplicate)
AY12421	5/21/18	1436	G	Water	4	MM-15
AY12422	5/21/18	1604	G	Water	2	MM-16
AY12423	5/21/18	1625	G	Water	2	FB-1 (Field Blank)
AY12424	5/22/18	0946	G	Water	2	MM-17R
AY12425	5/22/18	1101	G	Water	2	MM-18
AY12426	5/22/18	1208	G	Water	4	MM-19
AY12427	5/22/18	1318	G	Water	2	MM-20
AY12428	5/22/18	1441	G	Water	2	MM-11
AY12429	5/22/18	1557	G	Water	2	MM-1
AY12430	5/22/18	1656	G	Water	2	MM-20
AY12431	5/22/18	1720	G	Water	2	FB-2 (Field Blank)
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
<b>Empty Kit Relinquished by:</b> Relinquished by: Sarah Copeland Date/Time: 5/29/2018, 0930 Relinquished by: Date/Time: Relinquished by: Date/Time:		<b>Special Instructions/QC Requirements:</b> Time: _____ Method of Shipment: _____ Received by: [Signature] Date/Time: 5/30/18 10:17 Company: TAPCO Received by: Date/Time: Company: Received by: Date/Time: Company:				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) and other Remarks: [Signature]				



**Chain of Custody Record**



<b>Client Information</b> Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Calera State: AL, Zip: 35040 Phone: 205-664-6121 (Tel) Email: spcopella@southernco.com Project Name: CCR Site: Gorgas Landfill 1152		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com	
<b>Sampler:</b> Ben Rothschald Phone:		Carrier Tracking No(s):	
Due Date Requested: TAT Requested (days): Routine		Analysis Requested	
PO #:		Total Number of containers	
MO #:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Project #: 40007143 SSONW:		Special Instructions/Note:	
<b>Sample Identification</b>		Perform MS/MSD (Yes or No)	
Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Semisolid, BPA, Tissue, Air)
5/23/18	0938	G	Water
5/23/18	0938	G	Water
5/23/18	1050	G	Water
5/23/18	1153	G	Water
5/23/18	1354	G	Water
5/23/18	1517	G	Water
5/24/18	1040	G	Water
5/24/18	1222	G	Water
5/24/18	1352	G	Water
5/24/18	1430	G	Water
AY12432			
AY12433			
AY12434			
AY12435			
AY12436			
AY12437			
AY12438			
AY12439			
AY12440			
AY12441			
SM 4500 F <sub>0</sub>		SM 4500 C <sub>1</sub> E	
SM 4500 S <sub>04</sub> E		SM 4500 S <sub>04</sub> E	
9315, R4226, 9320, R4228, R2256, R4228, GPPC		9315, R4226, 9320, R4228, R2256, R4228, GPPC	
Field Filtered Sample (Yes or No)		Return to Client	
Perform MS/MSD (Yes or No)		Disposal By Lab	
Preservation Code:		Special Instructions/QC Requirements:	
MW-6		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
MW-6 Dup (Sample Duplicate)		Return to Client	
MW-7		Archive For _____ Months	
MW-8		Special Instructions/QC Requirements:	
MW-5		Method of Shipment:	
MW-4		Received by: [Signature] Date/Time: 5/30/18 10:17	
MW-3		Received by: [Signature] Date/Time:	
MW-12		Received by: [Signature] Date/Time:	
MW-10		Received by: [Signature] Date/Time:	
EB-1 (Equipment Blank)		Cooler Temperature(s) °C and Other Remarks	
Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/>		Empty Kit Relinquished by:	
Deliverable Requested: I, II, III, IV, Other (specify)		Relinquished by: Sarah Copeland Date/Time: 5/29/2018, 0930	
Company: APC		Relinquished by:	
Company:		Relinquished by:	
Company:		Relinquished by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:	



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-154380-1  
SDG Number: Gorgas Landfill 1152

**Login Number: 154380**

**List Number: 1**

**Creator: Whitmire, Cheyenne R**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	8.0°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Accreditation/Certification Summary

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

TestAmerica Job ID: 400-154380-1  
 SDG: Gorgas Landfill 1152

### Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	06-30-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-19

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-154380-2

TestAmerica Sample Delivery Group: Gorgas Landfill 1152

Client Project/Site: CCR Plant Gorgas

For:

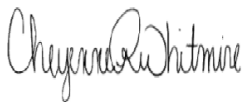
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

7/3/2018 4:21:22 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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

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

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# Case Narrative

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

TestAmerica Job ID: 400-154380-2  
SDG: Gorgas Landfill 1152

**Job ID: 400-154380-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-154380-2

#### RAD

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-368717: Sample aliquots reduced due to limited sample volume.

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-368755: Sample aliquots reduced due to limited sample volume.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-368712: Sample aliquots reduced due to limited sample volume. AY12418 MW-13 (400-154380-1), AY12419 MW-14 (400-154380-2), AY12420 MW-14 DUP (400-154380-3), AY12421 MW-15 (400-154380-4), AY12421 MW-15 (400-154380-4[DUJ]), AY12422 MW-16 (400-154380-5), AY12423 FB-1 (400-154380-6), AY12424 MW-17R (400-154380-7), AY12425 MW-18 (400-154380-8), AY12426 MW-19 (400-154380-9), AY12426 MW-19 (400-154380-9[DUJ]), AY12427 MW-20 (400-154380-10), AY12428 MW-11 (400-154380-11), AY12429 MW-1 (400-154380-12), AY12430 MW-2 (400-154380-13), AY12431 FB-2 (400-154380-14), AY12432 MW-6 (400-154380-15) and AY12433 MW-6 DUP (400-154380-16)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-368747: Sample aliquots reduced due to limited sample volume.

# Method Summary

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

TestAmerica Job ID: 400-154380-2  
SDG: Gorgas Landfill 1152

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

#### Protocol References:

None = None

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

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

#### Laboratory References:

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

# Sample Summary

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

TestAmerica Job ID: 400-154380-2  
SDG: Gorgas Landfill 1152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-154380-1	AY12418 MW-13	Water	05/21/18 12:00	05/30/18 10:17
400-154380-2	AY12419 MW-14	Water	05/21/18 13:13	05/30/18 10:17
400-154380-3	AY12420 MW-14 DUP	Water	05/21/18 13:13	05/30/18 10:17
400-154380-4	AY12421 MW-15	Water	05/21/18 14:36	05/30/18 10:17
400-154380-5	AY12422 MW-16	Water	05/21/18 16:04	05/30/18 10:17
400-154380-6	AY12423 FB-1	Water	05/21/18 16:25	05/30/18 10:17
400-154380-7	AY12424 MW-17R	Water	05/22/18 09:46	05/30/18 10:17
400-154380-8	AY12425 MW-18	Water	05/22/18 11:01	05/30/18 10:17
400-154380-9	AY12426 MW-19	Water	05/22/18 12:08	05/30/18 10:17
400-154380-10	AY12427 MW-20	Water	05/22/18 13:18	05/30/18 10:17
400-154380-11	AY12428 MW-11	Water	05/22/18 14:41	05/30/18 10:17
400-154380-12	AY12429 MW-1	Water	05/22/18 15:57	05/30/18 10:17
400-154380-13	AY12430 MW-2	Water	05/22/18 16:56	05/30/18 10:17
400-154380-14	AY12431 FB-2	Water	05/22/18 17:20	05/30/18 10:17
400-154380-15	AY12432 MW-6	Water	05/23/18 09:38	05/30/18 10:17
400-154380-16	AY12433 MW-6 DUP	Water	05/23/18 09:38	05/30/18 10:17
400-154380-17	AY12434 MW-7	Water	05/23/18 10:50	05/30/18 10:17
400-154380-18	AY12435 MW-8	Water	05/23/18 11:53	05/30/18 10:17
400-154380-19	AY12436 MW-5	Water	05/23/18 13:54	05/30/18 10:17
400-154380-20	AY12437 MW-4	Water	05/23/18 15:17	05/30/18 10:17
400-154380-21	AY12438 MW-3	Water	05/24/18 10:40	05/30/18 10:17
400-154380-22	AY12439 MW-12	Water	05/24/18 12:22	05/30/18 10:17
400-154380-23	AY12440 MW-10	Water	05/24/18 13:52	05/30/18 10:17
400-154380-24	AY12441 EB-1	Water	05/24/18 14:30	05/30/18 10:17

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12418 MW-13**

**Lab Sample ID: 400-154380-1**

**Date Collected: 05/21/18 12:00**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0848	U	0.0920	0.0924	1.00	0.146	pCi/L	06/04/18 09:54	06/30/18 09:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/04/18 09:54	06/30/18 09:58	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.322	U	0.353	0.355	1.00	0.580	pCi/L	06/04/18 10:51	06/25/18 09:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/04/18 10:51	06/25/18 09:45	1
Y Carrier	87.9		40 - 110					06/04/18 10:51	06/25/18 09:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.407	U	0.365	0.367	5.00	0.580	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12419 MW-14**

**Lab Sample ID: 400-154380-2**

**Date Collected: 05/21/18 13:13**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.124	U	0.107	0.108	1.00	0.159	pCi/L	06/04/18 09:54	06/30/18 10:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/04/18 09:54	06/30/18 10:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.250	U	0.333	0.333	1.00	0.553	pCi/L	06/04/18 10:51	06/25/18 09:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/04/18 10:51	06/25/18 09:45	1
Y Carrier	83.0		40 - 110					06/04/18 10:51	06/25/18 09:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.375	U	0.350	0.350	5.00	0.553	pCi/L		07/02/18 11:33	1



# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12420 MW-14 DUP**

**Lab Sample ID: 400-154380-3**

**Date Collected: 05/21/18 13:13**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0399	U	0.0637	0.0638	1.00	0.112	pCi/L	06/04/18 09:54	06/30/18 11:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 09:54	06/30/18 11:54	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.302	U	0.348	0.350	1.00	0.574	pCi/L	06/04/18 10:51	06/25/18 09:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 10:51	06/25/18 09:45	1
Y Carrier	83.4		40 - 110					06/04/18 10:51	06/25/18 09:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.342	U	0.354	0.356	5.00	0.574	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12421 MW-15**

**Lab Sample ID: 400-154380-4**

**Date Collected: 05/21/18 14:36**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.102	U	0.101	0.102	1.00	0.158	pCi/L	06/04/18 09:54	06/30/18 11:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					06/04/18 09:54	06/30/18 11:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.107	U	0.303	0.303	1.00	0.522	pCi/L	06/04/18 10:51	06/25/18 09:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					06/04/18 10:51	06/25/18 09:46	1
Y Carrier	89.3		40 - 110					06/04/18 10:51	06/25/18 09:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.209	U	0.319	0.320	5.00	0.522	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12422 MW-16**

**Lab Sample ID: 400-154380-5**

**Date Collected: 05/21/18 16:04**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00450	U	0.0706	0.0706	1.00	0.148	pCi/L	06/04/18 09:54	06/30/18 11:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/04/18 09:54	06/30/18 11:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.12		0.504	0.541	1.00	0.650	pCi/L	06/04/18 10:51	06/25/18 09:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/04/18 10:51	06/25/18 09:46	1
Y Carrier	85.6		40 - 110					06/04/18 10:51	06/25/18 09:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.13		0.509	0.546	5.00	0.650	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12423 FB-1**

**Lab Sample ID: 400-154380-6**

**Date Collected: 05/21/18 16:25**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0334	U	0.0585	0.0585	1.00	0.149	pCi/L	06/04/18 09:54	06/30/18 11:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					06/04/18 09:54	06/30/18 11:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.000	U	0.342	0.342	1.00	0.605	pCi/L	06/04/18 10:51	06/25/18 09:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					06/04/18 10:51	06/25/18 09:46	1
Y Carrier	85.6		40 - 110					06/04/18 10:51	06/25/18 09:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0334	U	0.347	0.347	5.00	0.605	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12424 MW-17R**

**Lab Sample ID: 400-154380-7**

**Date Collected: 05/22/18 09:46**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.257		0.119	0.121	1.00	0.118	pCi/L	06/04/18 09:54	06/30/18 11:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 09:54	06/30/18 11:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.328	U	0.329	0.330	1.00	0.535	pCi/L	06/04/18 10:51	06/25/18 09:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 10:51	06/25/18 09:46	1
Y Carrier	86.4		40 - 110					06/04/18 10:51	06/25/18 09:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.584		0.350	0.351	5.00	0.535	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12425 MW-18**

**Lab Sample ID: 400-154380-8**

**Date Collected: 05/22/18 11:01**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0419	U	0.0598	0.0599	1.00	0.156	pCi/L	06/04/18 09:54	06/30/18 11:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					06/04/18 09:54	06/30/18 11:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.382	U	0.327	0.329	1.00	0.523	pCi/L	06/04/18 10:51	06/25/18 09:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					06/04/18 10:51	06/25/18 09:46	1
Y Carrier	86.0		40 - 110					06/04/18 10:51	06/25/18 09:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.340	U	0.332	0.334	5.00	0.523	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12426 MW-19**

**Lab Sample ID: 400-154380-9**

**Date Collected: 05/22/18 12:08**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0992	U	0.0890	0.0895	1.00	0.131	pCi/L	06/04/18 09:54	06/30/18 11:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					06/04/18 09:54	06/30/18 11:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.285	U	0.318	0.319	1.00	0.523	pCi/L	06/04/18 10:51	06/25/18 09:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					06/04/18 10:51	06/25/18 09:49	1
Y Carrier	87.1		40 - 110					06/04/18 10:51	06/25/18 09:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.384	U	0.330	0.331	5.00	0.523	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12427 MW-20**

**Lab Sample ID: 400-154380-10**

**Date Collected: 05/22/18 13:18**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.253		0.120	0.122	1.00	0.132	pCi/L	06/04/18 09:54	06/30/18 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					06/04/18 09:54	06/30/18 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.328	U	0.292	0.293	1.00	0.469	pCi/L	06/04/18 10:51	06/25/18 09:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					06/04/18 10:51	06/25/18 09:49	1
Y Carrier	90.8		40 - 110					06/04/18 10:51	06/25/18 09:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.581		0.316	0.317	5.00	0.469	pCi/L		07/02/18 11:33	1



# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12428 MW-11**

**Lab Sample ID: 400-154380-11**

**Date Collected: 05/22/18 14:41**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.153		0.104	0.105	1.00	0.138	pCi/L	06/04/18 09:54	06/30/18 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					06/04/18 09:54	06/30/18 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.123	U	0.309	0.310	1.00	0.530	pCi/L	06/04/18 10:51	06/25/18 09:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					06/04/18 10:51	06/25/18 09:49	1
Y Carrier	92.7		40 - 110					06/04/18 10:51	06/25/18 09:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.276	U	0.326	0.327	5.00	0.530	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12429 MW-1**

**Lab Sample ID: 400-154380-12**

**Date Collected: 05/22/18 15:57**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0751	U	0.0803	0.0806	1.00	0.125	pCi/L	06/04/18 09:54	06/30/18 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					06/04/18 09:54	06/30/18 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.166	U	0.292	0.292	1.00	0.544	pCi/L	06/04/18 10:51	06/25/18 09:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					06/04/18 10:51	06/25/18 09:51	1
Y Carrier	87.9		40 - 110					06/04/18 10:51	06/25/18 09:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0910	U	0.303	0.303	5.00	0.544	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12430 MW-2**

**Lab Sample ID: 400-154380-13**

Date Collected: 05/22/18 16:56

Matrix: Water

Date Received: 05/30/18 10:17

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.172		0.107	0.108	1.00	0.136	pCi/L	06/04/18 09:54	06/30/18 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/04/18 09:54	06/30/18 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.165	U	0.276	0.277	1.00	0.519	pCi/L	06/04/18 10:51	06/25/18 09:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/04/18 10:51	06/25/18 09:51	1
Y Carrier	87.9		40 - 110					06/04/18 10:51	06/25/18 09:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00770	U	0.296	0.297	5.00	0.519	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12431 FB-2**

**Lab Sample ID: 400-154380-14**

**Date Collected: 05/22/18 17:20**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0252	U	0.0672	0.0672	1.00	0.130	pCi/L	06/04/18 09:54	06/30/18 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 09:54	06/30/18 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0118	U	0.315	0.315	1.00	0.565	pCi/L	06/04/18 10:51	06/25/18 09:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 10:51	06/25/18 09:51	1
Y Carrier	80.0		40 - 110					06/04/18 10:51	06/25/18 09:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0134	U	0.322	0.322	5.00	0.565	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12432 MW-6**

**Lab Sample ID: 400-154380-15**

**Date Collected: 05/23/18 09:38**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.253		0.116	0.118	1.00	0.118	pCi/L	06/04/18 09:54	06/30/18 11:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					06/04/18 09:54	06/30/18 11:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.665		0.310	0.316	1.00	0.444	pCi/L	06/04/18 10:51	06/25/18 09:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					06/04/18 10:51	06/25/18 09:51	1
Y Carrier	89.7		40 - 110					06/04/18 10:51	06/25/18 09:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.918		0.331	0.337	5.00	0.444	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12433 MW-6 DUP**

**Lab Sample ID: 400-154380-16**

Date Collected: 05/23/18 09:38

Matrix: Water

Date Received: 05/30/18 10:17

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.371		0.134	0.138	1.00	0.122	pCi/L	06/04/18 09:54	06/30/18 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					06/04/18 09:54	06/30/18 11:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.916		0.367	0.376	1.00	0.527	pCi/L	06/04/18 10:51	06/25/18 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					06/04/18 10:51	06/25/18 09:52	1
Y Carrier	88.6		40 - 110					06/04/18 10:51	06/25/18 09:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.29		0.391	0.401	5.00	0.527	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12434 MW-7**

**Lab Sample ID: 400-154380-17**

**Date Collected: 05/23/18 10:50**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0533	U	0.0625	0.0627	1.00	0.101	pCi/L	06/04/18 14:04	07/01/18 09:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					06/04/18 14:04	07/01/18 09:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0341	U	0.249	0.250	1.00	0.459	pCi/L	06/04/18 15:07	06/21/18 15:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					06/04/18 15:07	06/21/18 15:52	1
Y Carrier	89.3		40 - 110					06/04/18 15:07	06/21/18 15:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0192	U	0.257	0.258	5.00	0.459	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12435 MW-8**  
**Date Collected: 05/23/18 11:53**  
**Date Received: 05/30/18 10:17**

**Lab Sample ID: 400-154380-18**  
**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.126		0.0813	0.0821	1.00	0.104	pCi/L	06/04/18 14:04	07/01/18 09:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 14:04	07/01/18 09:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.251	U	0.294	0.295	1.00	0.485	pCi/L	06/04/18 15:07	06/21/18 15:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 15:07	06/21/18 15:52	1
Y Carrier	91.2		40 - 110					06/04/18 15:07	06/21/18 15:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.377	U	0.305	0.306	5.00	0.485	pCi/L		07/02/18 11:33	1



# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12436 MW-5**

**Lab Sample ID: 400-154380-19**

**Date Collected: 05/23/18 13:54**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.119		0.0826	0.0833	1.00	0.111	pCi/L	06/04/18 14:04	07/01/18 09:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					06/04/18 14:04	07/01/18 09:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.424	U	0.303	0.305	1.00	0.469	pCi/L	06/04/18 15:07	06/21/18 15:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					06/04/18 15:07	06/21/18 15:53	1
Y Carrier	92.3		40 - 110					06/04/18 15:07	06/21/18 15:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.543		0.314	0.316	5.00	0.469	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12437 MW-4**

**Lab Sample ID: 400-154380-20**

**Date Collected: 05/23/18 15:17**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0134	U	0.0452	0.0453	1.00	0.0919	pCi/L	06/04/18 14:04	07/01/18 09:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					06/04/18 14:04	07/01/18 09:34	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.173	U	0.269	0.269	1.00	0.454	pCi/L	06/04/18 15:07	06/21/18 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					06/04/18 15:07	06/21/18 15:49	1
Y Carrier	91.2		40 - 110					06/04/18 15:07	06/21/18 15:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.186	U	0.273	0.273	5.00	0.454	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12438 MW-3**

**Lab Sample ID: 400-154380-21**

**Date Collected: 05/24/18 10:40**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0321	U	0.0513	0.0514	1.00	0.0903	pCi/L	06/04/18 14:04	07/01/18 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 14:04	07/01/18 11:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.416	U	0.309	0.311	1.00	0.484	pCi/L	06/04/18 15:07	06/21/18 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 15:07	06/21/18 15:49	1
Y Carrier	89.0		40 - 110					06/04/18 15:07	06/21/18 15:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.448	U	0.313	0.315	5.00	0.484	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12439 MW-12**

**Lab Sample ID: 400-154380-22**

Date Collected: 05/24/18 12:22

Matrix: Water

Date Received: 05/30/18 10:17

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.141		0.0955	0.0964	1.00	0.130	pCi/L	06/04/18 14:04	07/01/18 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 14:04	07/01/18 11:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.615		0.327	0.332	1.00	0.484	pCi/L	06/04/18 15:07	06/21/18 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 15:07	06/21/18 15:49	1
Y Carrier	87.5		40 - 110					06/04/18 15:07	06/21/18 15:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.756		0.341	0.346	5.00	0.484	pCi/L		07/02/18 11:33	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12440 MW-10**

**Lab Sample ID: 400-154380-23**

Date Collected: 05/24/18 13:52

Matrix: Water

Date Received: 05/30/18 10:17

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.141		0.0967	0.0976	1.00	0.132	pCi/L	06/04/18 14:04	07/01/18 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					06/04/18 14:04	07/01/18 11:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.331	U	0.278	0.280	1.00	0.441	pCi/L	06/04/18 15:07	06/21/18 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					06/04/18 15:07	06/21/18 15:49	1
Y Carrier	93.1		40 - 110					06/04/18 15:07	06/21/18 15:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.472		0.294	0.297	5.00	0.441	pCi/L		07/02/18 11:38	1

# Client Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12441 EB-1**

**Lab Sample ID: 400-154380-24**

**Date Collected: 05/24/18 14:30**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0144	U	0.0505	0.0505	1.00	0.118	pCi/L	06/04/18 14:04	07/01/18 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 14:04	07/01/18 11:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.249	U	0.268	0.269	1.00	0.437	pCi/L	06/04/18 15:07	06/21/18 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/04/18 15:07	06/21/18 15:49	1
Y Carrier	92.0		40 - 110					06/04/18 15:07	06/21/18 15:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.234	U	0.273	0.274	5.00	0.437	pCi/L		07/02/18 11:38	1

# Definitions/Glossary

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

TestAmerica Job ID: 400-154380-2  
SDG: Gorgas Landfill 1152

## Qualifiers

### Rad

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

## Glossary

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

# Lab Chronicle

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12418 MW-13**  
**Date Collected: 05/21/18 12:00**  
**Date Received: 05/30/18 10:17**

**Lab Sample ID: 400-154380-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373287	06/30/18 09:58	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372339	06/25/18 09:45	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12419 MW-14**  
**Date Collected: 05/21/18 13:13**  
**Date Received: 05/30/18 10:17**

**Lab Sample ID: 400-154380-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 10:03	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372339	06/25/18 09:45	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12420 MW-14 DUP**  
**Date Collected: 05/21/18 13:13**  
**Date Received: 05/30/18 10:17**

**Lab Sample ID: 400-154380-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:54	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372339	06/25/18 09:45	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12421 MW-15**  
**Date Collected: 05/21/18 14:36**  
**Date Received: 05/30/18 10:17**

**Lab Sample ID: 400-154380-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372339	06/25/18 09:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL



# Lab Chronicle

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12422 MW-16**

**Lab Sample ID: 400-154380-5**

**Date Collected: 05/21/18 16:04**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372339	06/25/18 09:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12423 FB-1**

**Lab Sample ID: 400-154380-6**

**Date Collected: 05/21/18 16:25**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372339	06/25/18 09:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12424 MW-17R**

**Lab Sample ID: 400-154380-7**

**Date Collected: 05/22/18 09:46**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372339	06/25/18 09:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12425 MW-18**

**Lab Sample ID: 400-154380-8**

**Date Collected: 05/22/18 11:01**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372339	06/25/18 09:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

# Lab Chronicle

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

TestAmerica Job ID: 400-154380-2  
SDG: Gorgas Landfill 1152

**Client Sample ID: AY12426 MW-19**

**Lab Sample ID: 400-154380-9**

**Date Collected: 05/22/18 12:08**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372340	06/25/18 09:49	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12427 MW-20**

**Lab Sample ID: 400-154380-10**

**Date Collected: 05/22/18 13:18**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:56	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372340	06/25/18 09:49	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12428 MW-11**

**Lab Sample ID: 400-154380-11**

**Date Collected: 05/22/18 14:41**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:56	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372340	06/25/18 09:49	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12429 MW-1**

**Lab Sample ID: 400-154380-12**

**Date Collected: 05/22/18 15:57**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:56	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372340	06/25/18 09:51	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

# Lab Chronicle

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

TestAmerica Job ID: 400-154380-2  
SDG: Gorgas Landfill 1152

**Client Sample ID: AY12430 MW-2**

**Lab Sample ID: 400-154380-13**

**Date Collected: 05/22/18 16:56**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:56	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372340	06/25/18 09:51	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12431 FB-2**

**Lab Sample ID: 400-154380-14**

**Date Collected: 05/22/18 17:20**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373286	06/30/18 11:56	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372340	06/25/18 09:51	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12432 MW-6**

**Lab Sample ID: 400-154380-15**

**Date Collected: 05/23/18 09:38**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373288	06/30/18 11:52	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372340	06/25/18 09:51	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12433 MW-6 DUP**

**Lab Sample ID: 400-154380-16**

**Date Collected: 05/23/18 09:38**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368712	06/04/18 09:54	JLC	TAL SL
Total/NA	Analysis	9315		1	373288	06/30/18 11:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			368717	06/04/18 10:51	JLC	TAL SL
Total/NA	Analysis	9320		1	372347	06/25/18 09:52	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

# Lab Chronicle

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

**Client Sample ID: AY12434 MW-7**

**Lab Sample ID: 400-154380-17**

**Date Collected: 05/23/18 10:50**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368747	06/04/18 14:04	JLC	TAL SL
Total/NA	Analysis	9315		1	373450	07/01/18 09:33	CDR	TAL SL
Total/NA	Prep	PrecSep_0			368755	06/04/18 15:07	JLC	TAL SL
Total/NA	Analysis	9320		1	371613	06/21/18 15:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12435 MW-8**

**Lab Sample ID: 400-154380-18**

**Date Collected: 05/23/18 11:53**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368747	06/04/18 14:04	JLC	TAL SL
Total/NA	Analysis	9315		1	373450	07/01/18 09:33	CDR	TAL SL
Total/NA	Prep	PrecSep_0			368755	06/04/18 15:07	JLC	TAL SL
Total/NA	Analysis	9320		1	371613	06/21/18 15:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12436 MW-5**

**Lab Sample ID: 400-154380-19**

**Date Collected: 05/23/18 13:54**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368747	06/04/18 14:04	JLC	TAL SL
Total/NA	Analysis	9315		1	373450	07/01/18 09:33	CDR	TAL SL
Total/NA	Prep	PrecSep_0			368755	06/04/18 15:07	JLC	TAL SL
Total/NA	Analysis	9320		1	371613	06/21/18 15:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12437 MW-4**

**Lab Sample ID: 400-154380-20**

**Date Collected: 05/23/18 15:17**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368747	06/04/18 14:04	JLC	TAL SL
Total/NA	Analysis	9315		1	373450	07/01/18 09:34	CDR	TAL SL
Total/NA	Prep	PrecSep_0			368755	06/04/18 15:07	JLC	TAL SL
Total/NA	Analysis	9320		1	371604	06/21/18 15:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

# Lab Chronicle

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

TestAmerica Job ID: 400-154380-2  
SDG: Gorgas Landfill 1152

**Client Sample ID: AY12438 MW-3**

**Lab Sample ID: 400-154380-21**

**Date Collected: 05/24/18 10:40**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368747	06/04/18 14:04	JLC	TAL SL
Total/NA	Analysis	9315		1	373449	07/01/18 11:04	CDR	TAL SL
Total/NA	Prep	PrecSep_0			368755	06/04/18 15:07	JLC	TAL SL
Total/NA	Analysis	9320		1	371604	06/21/18 15:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12439 MW-12**

**Lab Sample ID: 400-154380-22**

**Date Collected: 05/24/18 12:22**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368747	06/04/18 14:04	JLC	TAL SL
Total/NA	Analysis	9315		1	373449	07/01/18 11:04	CDR	TAL SL
Total/NA	Prep	PrecSep_0			368755	06/04/18 15:07	JLC	TAL SL
Total/NA	Analysis	9320		1	371604	06/21/18 15:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:33	ALS	TAL SL

**Client Sample ID: AY12440 MW-10**

**Lab Sample ID: 400-154380-23**

**Date Collected: 05/24/18 13:52**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368747	06/04/18 14:04	JLC	TAL SL
Total/NA	Analysis	9315		1	373449	07/01/18 11:04	CDR	TAL SL
Total/NA	Prep	PrecSep_0			368755	06/04/18 15:07	JLC	TAL SL
Total/NA	Analysis	9320		1	371604	06/21/18 15:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:38	ALS	TAL SL

**Client Sample ID: AY12441 EB-1**

**Lab Sample ID: 400-154380-24**

**Date Collected: 05/24/18 14:30**

**Matrix: Water**

**Date Received: 05/30/18 10:17**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			368747	06/04/18 14:04	JLC	TAL SL
Total/NA	Analysis	9315		1	373449	07/01/18 11:04	CDR	TAL SL
Total/NA	Prep	PrecSep_0			368755	06/04/18 15:07	JLC	TAL SL
Total/NA	Analysis	9320		1	371604	06/21/18 15:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	373524	07/02/18 11:38	ALS	TAL SL

### Laboratory References:

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

# QC Association Summary

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

## Rad

### Prep Batch: 368712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-1	AY12418 MW-13	Total/NA	Water	PrecSep-21	
400-154380-2	AY12419 MW-14	Total/NA	Water	PrecSep-21	
400-154380-3	AY12420 MW-14 DUP	Total/NA	Water	PrecSep-21	
400-154380-4	AY12421 MW-15	Total/NA	Water	PrecSep-21	
400-154380-5	AY12422 MW-16	Total/NA	Water	PrecSep-21	
400-154380-6	AY12423 FB-1	Total/NA	Water	PrecSep-21	
400-154380-7	AY12424 MW-17R	Total/NA	Water	PrecSep-21	
400-154380-8	AY12425 MW-18	Total/NA	Water	PrecSep-21	
400-154380-9	AY12426 MW-19	Total/NA	Water	PrecSep-21	
400-154380-10	AY12427 MW-20	Total/NA	Water	PrecSep-21	
400-154380-11	AY12428 MW-11	Total/NA	Water	PrecSep-21	
400-154380-12	AY12429 MW-1	Total/NA	Water	PrecSep-21	
400-154380-13	AY12430 MW-2	Total/NA	Water	PrecSep-21	
400-154380-14	AY12431 FB-2	Total/NA	Water	PrecSep-21	
400-154380-15	AY12432 MW-6	Total/NA	Water	PrecSep-21	
400-154380-16	AY12433 MW-6 DUP	Total/NA	Water	PrecSep-21	
MB 160-368712/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-368712/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-154380-4 DU	AY12421 MW-15	Total/NA	Water	PrecSep-21	
400-154380-9 DU	AY12426 MW-19	Total/NA	Water	PrecSep-21	

### Prep Batch: 368717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-1	AY12418 MW-13	Total/NA	Water	PrecSep_0	
400-154380-2	AY12419 MW-14	Total/NA	Water	PrecSep_0	
400-154380-3	AY12420 MW-14 DUP	Total/NA	Water	PrecSep_0	
400-154380-4	AY12421 MW-15	Total/NA	Water	PrecSep_0	
400-154380-5	AY12422 MW-16	Total/NA	Water	PrecSep_0	
400-154380-6	AY12423 FB-1	Total/NA	Water	PrecSep_0	
400-154380-7	AY12424 MW-17R	Total/NA	Water	PrecSep_0	
400-154380-8	AY12425 MW-18	Total/NA	Water	PrecSep_0	
400-154380-9	AY12426 MW-19	Total/NA	Water	PrecSep_0	
400-154380-10	AY12427 MW-20	Total/NA	Water	PrecSep_0	
400-154380-11	AY12428 MW-11	Total/NA	Water	PrecSep_0	
400-154380-12	AY12429 MW-1	Total/NA	Water	PrecSep_0	
400-154380-13	AY12430 MW-2	Total/NA	Water	PrecSep_0	
400-154380-14	AY12431 FB-2	Total/NA	Water	PrecSep_0	
400-154380-15	AY12432 MW-6	Total/NA	Water	PrecSep_0	
400-154380-16	AY12433 MW-6 DUP	Total/NA	Water	PrecSep_0	
MB 160-368717/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-368717/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-154380-4 DU	AY12421 MW-15	Total/NA	Water	PrecSep_0	
400-154380-9 DU	AY12426 MW-19	Total/NA	Water	PrecSep_0	

### Prep Batch: 368747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-17	AY12434 MW-7	Total/NA	Water	PrecSep-21	
400-154380-18	AY12435 MW-8	Total/NA	Water	PrecSep-21	
400-154380-19	AY12436 MW-5	Total/NA	Water	PrecSep-21	
400-154380-20	AY12437 MW-4	Total/NA	Water	PrecSep-21	
400-154380-21	AY12438 MW-3	Total/NA	Water	PrecSep-21	

TestAmerica Pensacola

# QC Association Summary

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

TestAmerica Job ID: 400-154380-2  
SDG: Gorgas Landfill 1152

## Rad (Continued)

### Prep Batch: 368747 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-22	AY12439 MW-12	Total/NA	Water	PrecSep-21	
400-154380-23	AY12440 MW-10	Total/NA	Water	PrecSep-21	
400-154380-24	AY12441 EB-1	Total/NA	Water	PrecSep-21	
MB 160-368747/15-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-368747/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-368747/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 368755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-154380-17	AY12434 MW-7	Total/NA	Water	PrecSep_0	
400-154380-18	AY12435 MW-8	Total/NA	Water	PrecSep_0	
400-154380-19	AY12436 MW-5	Total/NA	Water	PrecSep_0	
400-154380-20	AY12437 MW-4	Total/NA	Water	PrecSep_0	
400-154380-21	AY12438 MW-3	Total/NA	Water	PrecSep_0	
400-154380-22	AY12439 MW-12	Total/NA	Water	PrecSep_0	
400-154380-23	AY12440 MW-10	Total/NA	Water	PrecSep_0	
400-154380-24	AY12441 EB-1	Total/NA	Water	PrecSep_0	
MB 160-368755/15-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-368755/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-368755/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

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

**Lab Sample ID: MB 160-368712/23-A**  
**Matrix: Water**  
**Analysis Batch: 373288**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 368712**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.002098	U	0.0540	0.0540	1.00	0.122	pCi/L	06/04/18 09:54	06/30/18 11:53	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
	102				06/04/18 09:54	06/30/18 11:53	1			

**Lab Sample ID: LCS 160-368712/1-A**  
**Matrix: Water**  
**Analysis Batch: 373288**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 368712**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.7	14.18		1.51	1.00	0.123	pCi/L	90	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	40 - 110						
	92.6				06/04/18 09:54	06/30/18 11:53	1		

**Lab Sample ID: 400-154380-4 DU**  
**Matrix: Water**  
**Analysis Batch: 373286**

**Client Sample ID: AY12421 MW-15**  
**Prep Type: Total/NA**  
**Prep Batch: 368712**

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					Limit
Radium-226	0.102	U	0.06640	U	0.0930	1.00	0.157	pCi/L	0.18	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
	102				06/04/18 09:54	06/30/18 11:53	1			

**Lab Sample ID: 400-154380-9 DU**  
**Matrix: Water**  
**Analysis Batch: 373286**

**Client Sample ID: AY12426 MW-19**  
**Prep Type: Total/NA**  
**Prep Batch: 368712**

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					Limit
Radium-226	0.0992	U	0.1149	U	0.0982	1.00	0.142	pCi/L	0.08	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
	99.4				06/04/18 14:04	07/01/18 11:04	1			

**Lab Sample ID: MB 160-368747/15-A**  
**Matrix: Water**  
**Analysis Batch: 373449**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 368747**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.02079	U	0.0651	0.0652	1.00	0.125	pCi/L	06/04/18 14:04	07/01/18 11:04	1

TestAmerica Pensacola



# QC Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

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

**Lab Sample ID: MB 160-368747/15-A**  
**Matrix: Water**  
**Analysis Batch: 373449**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 368747**

Carrier	<i>MB</i> %Yield	<i>MB</i> Qualifier	Limits
Ba Carrier	92.6		40 - 110

Prepared	Analyzed	Dil Fac
06/04/18 14:04	07/01/18 11:04	1

**Lab Sample ID: LCS 160-368747/1-A**  
**Matrix: Water**  
**Analysis Batch: 373455**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 368747**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.7	13.28		1.38	1.00	0.0935	pCi/L	84	68 - 137

Carrier	<i>LCS</i> %Yield	<i>LCS</i> Qualifier	Limits
Ba Carrier	97.1		40 - 110

**Lab Sample ID: LCSD 160-368747/2-A**  
**Matrix: Water**  
**Analysis Batch: 373455**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 368747**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	15.7	11.90		1.25	1.00	0.0846	pCi/L	76	68 - 137	0.53	1

Carrier	<i>LCSD</i> %Yield	<i>LCSD</i> Qualifier	Limits
Ba Carrier	103		40 - 110

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

**Lab Sample ID: MB 160-368717/23-A**  
**Matrix: Water**  
**Analysis Batch: 372347**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 368717**

Analyte	<i>MB</i> Result	<i>MB</i> Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.09981	U	0.311	0.311	1.00	0.538	pCi/L	06/04/18 10:51	06/25/18 09:52	1

Carrier	<i>MB</i> %Yield	<i>MB</i> Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	85.6		40 - 110

Prepared	Analyzed	Dil Fac
06/04/18 10:51	06/25/18 09:52	1
06/04/18 10:51	06/25/18 09:52	1

**Lab Sample ID: LCS 160-368717/1-A**  
**Matrix: Water**  
**Analysis Batch: 372339**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 368717**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	10.9	12.60		1.47	1.00	0.583	pCi/L	115	56 - 140

TestAmerica Pensacola

# QC Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

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

**Lab Sample ID: LCS 160-368717/1-A**  
**Matrix: Water**  
**Analysis Batch: 372339**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 368717**

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	92.6		40 - 110
Y Carrier	89.7		40 - 110

**Lab Sample ID: 400-154380-4 DU**  
**Matrix: Water**  
**Analysis Batch: 372339**

**Client Sample ID: AY12421 MW-15**  
**Prep Type: Total/NA**  
**Prep Batch: 368717**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.107	U	0.4795	U	0.383	1.00	0.609	pCi/L	0.54	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	92.0		40 - 110

**Lab Sample ID: 400-154380-9 DU**  
**Matrix: Water**  
**Analysis Batch: 372340**

**Client Sample ID: AY12426 MW-19**  
**Prep Type: Total/NA**  
**Prep Batch: 368717**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.285	U	0.6303		0.339	1.00	0.501	pCi/L	0.52	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	99.4		40 - 110
Y Carrier	90.1		40 - 110

**Lab Sample ID: MB 160-368755/15-A**  
**Matrix: Water**  
**Analysis Batch: 371604**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 368755**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.06256	U	0.265	0.265	1.00	0.467	pCi/L	06/04/18 15:07	06/21/18 15:50	1

	MB	MB	Limits	Prepared	Analyzed	Dil Fac
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110	06/04/18 15:07	06/21/18 15:50	1
Y Carrier	96.1		40 - 110	06/04/18 15:07	06/21/18 15:50	1

**Lab Sample ID: LCS 160-368755/1-A**  
**Matrix: Water**  
**Analysis Batch: 371613**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 368755**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	10.9	11.75		1.39	1.00	0.523	pCi/L	107	56 - 140

TestAmerica Pensacola

# QC Sample Results

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

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

**Lab Sample ID: LCS 160-368755/1-A**  
**Matrix: Water**  
**Analysis Batch: 371613**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 368755**

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	97.1		40 - 110
Y Carrier	90.8		40 - 110

**Lab Sample ID: LCSD 160-368755/2-A**  
**Matrix: Water**  
**Analysis Batch: 371613**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 368755**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	RER Limit
									56 - 140	0.22	1	
Radium-228	10.9	11.16		1.32	1.00	0.498	pCi/L	102				

	LCSD	LCSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	90.8		40 - 110

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

**Lab Sample ID: 400-154380-4 DU**  
**Matrix: Water**  
**Analysis Batch: 373524**

**Client Sample ID: AY12421 MW-15**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
										0.47
Combined Radium 226 + 228	0.209	U	0.5459	U	0.394	5.00	0.609	pCi/L		

**Lab Sample ID: 400-154380-9 DU**  
**Matrix: Water**  
**Analysis Batch: 373524**

**Client Sample ID: AY12426 MW-19**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
										0.53
Combined Radium 226 + 228	0.384	U	0.7453		0.353	5.00	0.501	pCi/L		

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

**Chain of Custody Record**



<b>Client Information</b> Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Callera State, Zip: AL, 35040 Phone: 205-664-6121 (Tel) Email: sgcopelia@southemco.com Project Name: CCR Site: Gorgas Landfill 1152		<b>Client Contact</b> Name: Ben Rothschild Phone: Company: Sarah Copeland		<b>Lab P.I.:</b> Whitmire, Chyanne R <b>E-Mail:</b> chyanne.whitmire@testamericacnc.com		<b>Carrier Tracking Note(s):</b> COC No: 400-56525-24537.1 Page: Page 1 of 2 Job #: 154380			
<b>Due Date Requested:</b> TAT Requested (days): PO #: WO #: Project #: CCR #: SOW #:		<b>Analysis Requested</b> Form M/MSD (Yes or No) Field Filtered Sample (Yes or No) Total Number of Containers		<b>Preservation Codes:</b> A - HCL B - NaOH N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 X - EDTA Y - EDA Z - other (specify)		<b>Special Instructions/Note:</b>			
<b>Sample Identification</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=comp, G=grab)</b>	<b>Matrix (Water, Solid, Composite, Other)</b>	<b>Preservation Code</b>	<b>Form M/MSD (Yes or No)</b>	<b>Field Filtered Sample (Yes or No)</b>	<b>Total Number of Containers</b>	<b>Special Instructions/Note:</b>
AY12418	5/21/18	1200	G	Water		X	X	2	MM-13
AY12419	5/21/18	1313	G	Water		X	X	2	MM-14
AY12420	5/21/18	1313	G	Water		X	X	2	MM-14 Dup (Sample Duplicate)
AY12421	5/21/18	1436	G	Water		X	X	4	MM-15
AY12422	5/21/18	1604	G	Water		X	X	2	MM-16
AY12423	5/21/18	1625	G	Water		X	X	2	FB-1 (Field Blank)
AY12424	5/22/18	0946	G	Water		X	X	2	MM-17R
AY12425	5/22/18	1101	G	Water		X	X	2	MM-18
AY12426	5/22/18	1208	G	Water		X	X	4	MM-19
AY12427	5/22/18	1318	G	Water		X	X	2	MM-20
AY12428	5/22/18	1441	G	Water		X	X	2	MM-11
AY12429	5/22/18	1557	G	Water		X	X	2	MM-1
AY12430	5/22/18	1656	G	Water		X	X	2	MM-20
AY12431	5/22/18	1720	G	Water		X	X	2	FB-2 (Field Blank)
<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months									
<b>Deliverable Requested:</b> <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological									
<b>Empty Kit Relinquished by:</b> Relinquished by: Sarah Copeland Date/Time: 5/29/2018, 0930 Relinquished by: Date/Time: Relinquished by: Date/Time:									
<b>Custody Seals Intact:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Cooler Temperature(s) and other Remarks:</b>									



**Chain of Custody Record**



**Client Information**  
 Company: Alabama Power General Test Laboratory  
 Address: 744 County Rd 87 GSC #8  
 City: Calera  
 State: AL 35040  
 Phone: 205-664-6121 (Tel)  
 Email: sgcopella@southernco.com  
 Project Name: CCR  
 Site: Gorgas Landfill 1152

**Sampler:** Ben Rothschadl  
**Phone:** [Blank]  
**Lab PM:** Whitmire, Cheyenne R  
**E-Mail:** cheyenne.whitmire@testamericainc.com

**Carrier Tracking Note(s):**

**Analysis Requested**

Due Date Requested: [Blank]  
 TAT Requested (days): Routine

PO #: [Blank]  
 MO #: [Blank]  
 Project #: 40007143  
 SSO#: [Blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		SM 4500 F <sub>1</sub>	SM 4500 Cl <sub>1</sub>	SM 4500 SO <sub>4</sub> F <sub>1</sub>	9315, R <sub>1</sub> A <sub>2</sub> Z <sub>2</sub> 6, 9320, R <sub>1</sub> A <sub>2</sub> Z <sub>2</sub> 8, R <sub>2</sub> Z <sub>2</sub> 5R <sub>1</sub> A <sub>2</sub> Z <sub>2</sub> 8, G <sub>1</sub> P <sub>1</sub> C	Total Number of Containers	Special Instructions/Note:
						Field Filtered	MS/MSD	Field Filtered	MS/MSD						
AY12432	5/23/18	0938	G	Water		X	X	X	X					2	MW-6
AY12433	5/23/18	0938	G	Water		X	X	X	X					2	MW-6 Dup (Sample Duplicate)
AY12434	5/23/18	1050	G	Water		X	X	X	X					2	MW-7
AY12435	5/23/18	1153	G	Water		X	X	X	X					2	MW-8
AY12436	5/23/18	1354	G	Water		X	X	X	X					2	MW-5
AY12437	5/23/18	1517	G	Water		X	X	X	X					2	MW-4
AY12438	5/24/18	1040	G	Water		X	X	X	X					2	MW-3
AY12439	5/24/18	1222	G	Water		X	X	X	X					2	MW-12
AY12440	5/24/18	1352	G	Water		X	X	X	X					2	MW-10
AY12441	5/24/18	1430	G	Water		X	X	X	X					2	EB-1 (Equipment Blank)

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

Return to Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:**

**Empty Kit Relinquished by:** [Blank]  
 Relinquished by: Sarah Copeland  
 Relinquished by: [Blank]  
 Relinquished by: [Blank]

**Time:** [Blank]  
 Date: 5/29/2018 0930  
 Date/Time: [Blank]  
 Date/Time: [Blank]  
 Date/Time: [Blank]

**Method of Shipment:** [Blank]  
 Received by: [Signature] 5/30/18 1017  
 Date/Time: [Blank]  
 Received by: [Blank]  
 Date/Time: [Blank]  
 Received by: [Blank]  
 Date/Time: [Blank]

**Custody Seals Intact:**  Yes  No  
 Cooler Temperature(s) °C and Other Remarks: [Blank]



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-154380-2  
SDG Number: Gorgas Landfill 1152

**Login Number: 154380**

**List Number: 1**

**Creator: Whitmire, Cheyenne R**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	8.0°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-154380-2  
SDG Number: Gorgas Landfill 1152

**Login Number: 154380**  
**List Number: 2**  
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**  
**List Creation: 06/01/18 04:46 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18,18
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-154380-2  
SDG Number: Gorgas Landfill 1152

**Login Number: 154380**  
**List Number: 3**  
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**  
**List Creation: 06/01/18 04:49 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18,18
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Accreditation/Certification Summary

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

TestAmerica Job ID: 400-154380-2  
 SDG: Gorgas Landfill 1152

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18 *
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-18 *
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-18 *
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-18 *

## Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18 *
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-18 *
Nevada	State Program	9	MO000542018-1	07-31-18 *

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

# Accreditation/Certification Summary

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

TestAmerica Job ID: 400-154380-2  
SDG: Gorgas Landfill 1152

## Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New Jersey	NELAP	2	MO002	06-30-18 *
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18 *
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18 *
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	07-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18 *
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

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

TestAmerica Pensacola

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

# Analytical Report



**Sample Group :** WMWGORLF\_1182  
**Project/Site :** Gorgas Landfill  
Parrish, AL 35580  
**For :** Southern Company Services  
3535 Colonnade Parkway  
Birmingham, AL 35243  
**Attention :** Dustin Brooks & Greg Dyer  
**Released By :** Laura Midkiff  
lbmidkif@southernco.com  
(205) 664-6197

The following data has been reviewed and approved by:

Quality Control:

Laura Midkiff

Digitally signed by Laura Midkiff  
DN: cn=Laura Midkiff, o=Alabama Power  
Company, ou=Environmental Affairs,  
email=lbmidkif@southernco.com, c=US  
Date: 2018.12.12 13:35:08 -06'00'

Supervision: T. Durant  
Maske

Digitally signed by T. Durant Maske  
DN: cn=T. Durant Maske, o=Alabama  
Power Company, ou=Environmental  
Affairs, email=tdmaske@southernco.com,  
c=US  
Date: 2018.12.13 16:17:58 -06'00'



Metals ICP

Gorgas Landfill

WMWGORLF\_1182

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY27120	633367	WMWGORLF_1182
AY27121	633367	WMWGORLF_1182
AY27122	633367	WMWGORLF_1182
AY27123	633367	WMWGORLF_1182
AY27124	633367	WMWGORLF_1182
AY27125	633367	WMWGORLF_1182
AY27126	633367	WMWGORLF_1182
AY27127	633367	WMWGORLF_1182
AY27128	633367	WMWGORLF_1182
AY27129	633367	WMWGORLF_1182
AY27130	633368	WMWGORLF_1182
AY27131	633368	WMWGORLF_1182
AY27132	633368	WMWGORLF_1182
AY27133	633368	WMWGORLF_1182
AY27301	633368	WMWGORLF_1182
AY27302	633368	WMWGORLF_1182
AY27303	633368	WMWGORLF_1182
AY27304	633368	WMWGORLF_1182
AY27305	633368	WMWGORLF_1182
AY27306	633368	WMWGORLF_1182
AY27307	633369	WMWGORLF_1182
AY27308	633369	WMWGORLF_1182
AY27309	633369	WMWGORLF_1182
AY27310	633369	WMWGORLF_1182

4. All of the above samples were analyzed by EPA 200.7 and prepared by EPA 1638.
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:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met except for the following:
  - AY27129 and AY27306 ms/msd spike level is less than 30% of the sample nominal concentration.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.



7. All samples were analyzed at a x2.03 dilution to compensate for potential matrix effects except for the following:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution</u>
AY27120	Calcium	x20.3
AY27121	Calcium	x50.75
AY27123	Calcium	x20.3
AY27124	Calcium	x20.3
AY27125	Calcium	x20.3
AY27126	Calcium	x20.3
AY27127	Calcium	x20.3
AY27128	Calcium	x20.3
AY27129	Calcium	x20.3
AY27129MS	Calcium	x20.3
AY27129MSD	Calcium	x20.3
AY27130	Calcium	x20.3
AY27131	Calcium	x20.3
AY27132	Calcium	x20.3
AY27133	Calcium	x20.3
AY27301	Calcium	x20.3
AY27303	Calcium	x20.3
AY27304	Calcium	x20.3
AY27305	Calcium	x20.3
AY27306	Calcium	x20.3
AY27306MS	Calcium	x20.3
AY27306MSD	Calcium	x20.3
AY27307	Calcium	x20.3
AY27308	Calcium	x20.3
AY27309	Calcium	x20.3

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



Metals ICPMS

Gorgas Landfill

WMWGORLF\_1182

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY27120	633730	WMWGORLF_1182
AY27121	633730	WMWGORLF_1182
AY27122	633730	WMWGORLF_1182
AY27123	633730	WMWGORLF_1182
AY27124	633730	WMWGORLF_1182
AY27125	633730	WMWGORLF_1182
AY27126	633730	WMWGORLF_1182
AY27127	633730	WMWGORLF_1182
AY27128	633730	WMWGORLF_1182
AY27129	633730	WMWGORLF_1182
AY27130	633731	WMWGORLF_1182
AY27131	633731	WMWGORLF_1182
AY27132	633731	WMWGORLF_1182
AY27133	633731	WMWGORLF_1182
AY27301	633676	WMWGORLF_1182
AY27302	633676	WMWGORLF_1182
AY27303	633676	WMWGORLF_1182
AY27304	633676	WMWGORLF_1182
AY27305	633676	WMWGORLF_1182
AY27306	633676	WMWGORLF_1182
AY27307	633676	WMWGORLF_1182
AY27308	633676	WMWGORLF_1182
AY27309	633676	WMWGORLF_1182
AY27310	633676	WMWGORLF_1182

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638.
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:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. All samples were analyzed at a x5.075 dilution to compensate for potential matrix effects.
  8. The raw data results are shown with dilution factors included.





Mercury

Gorgas Landfill

WMWGORLF\_1182

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY27120	633028	WMWGORLF_1182
AY27121	633028	WMWGORLF_1182
AY27122	633028	WMWGORLF_1182
AY27123	633028	WMWGORLF_1182
AY27124	633028	WMWGORLF_1182
AY27125	633028	WMWGORLF_1182
AY27126	633028	WMWGORLF_1182
AY27127	633028	WMWGORLF_1182
AY27128	633028	WMWGORLF_1182
AY27129	633028	WMWGORLF_1182
AY27130	633029	WMWGORLF_1182
AY27131	633029	WMWGORLF_1182
AY27132	633029	WMWGORLF_1182
AY27133	633029	WMWGORLF_1182
AY27301	633029	WMWGORLF_1182
AY27302	633029	WMWGORLF_1182
AY27303	633029	WMWGORLF_1182
AY27304	633029	WMWGORLF_1182
AY27305	633029	WMWGORLF_1182
AY27306	633029	WMWGORLF_1182
AY27307	633499	WMWGORLF_1182
AY27308	633499	WMWGORLF_1182
AY27309	633499	WMWGORLF_1182
AY27310	633499	WMWGORLF_1182

4. All of the above samples were analyzed and prepared by EPA 245.1.
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:

- 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\_1182

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY27120	633252	WMWGORLF_1182
AY27121	633252	WMWGORLF_1182
AY27122	633252	WMWGORLF_1182
AY27123	633252	WMWGORLF_1182
AY27124	633253	WMWGORLF_1182
AY27125	633253	WMWGORLF_1182
AY27126	633253	WMWGORLF_1182
AY27127	633253	WMWGORLF_1182
AY27128	633253	WMWGORLF_1182
AY27129	633253	WMWGORLF_1182
AY27130	633253	WMWGORLF_1182
AY27131	633253	WMWGORLF_1182
AY27132	633253	WMWGORLF_1182
AY27133	633253	WMWGORLF_1182
AY27301	633497	WMWGORLF_1182
AY27302	633497	WMWGORLF_1182
AY27303	633497	WMWGORLF_1182
AY27304	633497	WMWGORLF_1182
AY27305	633497	WMWGORLF_1182
AY27306	633497	WMWGORLF_1182
AY27307	633497	WMWGORLF_1182
AY27308	633497	WMWGORLF_1182
AY27309	633497	WMWGORLF_1182
AY27310	633497	WMWGORLF_1182

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:
  - AY27122
  - AY27302
  - AY27310

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY27120

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0187	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	J 0.00203	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	0.211	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	160	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0147	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.211	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		50	1220	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY27120

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	Limit
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit		
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115	101	70 to 130	1.60	20
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046	108	70 to 130	1.25	20
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115	99.4	70 to 130	0.602	20
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115	95.8	70 to 130	3.61	20
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75	214	70 to 130	7.69	20
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115	99.8	70 to 130	0.704	20
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115	91.8	70 to 130	1.20	20
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23	118	70 to 130	1.85	20
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.995	20
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15	102	70 to 130	0.840	20
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115	102	70 to 130	5.33	20
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115	98.6	70 to 130	1.41	20
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115	93.8	70 to 130	2.21	20
AY27129	Cobalt, Total	mg/L	0.00000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115	106	70 to 130	1.07	20
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115	102	70 to 130	0.00	20

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

Laboratory certification ID: E571114

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Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY27120

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY27123	Solids, Dissolved	mg/L	1.00	25			2900	53.0	40 to 60		1.02	5

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY27121

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	0.0405	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0108	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	0.252	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		50.75	5.075	25.375	348	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0485	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0816	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	3400	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY27121

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115	99.4	70 to 130	0.602	20
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115	101	70 to 130	1.60	20
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046	108	70 to 130	1.25	20
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.995	20
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15	102	70 to 130	0.840	20
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115	102	70 to 130	5.33	20
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115	98.6	70 to 130	1.41	20
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115	95.8	70 to 130	3.61	20
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75	214	70 to 130	7.69	20
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115	99.8	70 to 130	0.704	20
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115	91.8	70 to 130	1.20	20
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23	118	70 to 130	1.85	20
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115	93.8	70 to 130	2.21	20
AY27129	Cobalt, Total	mg/L	0.00000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115	106	70 to 130	1.07	20
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115	102	70 to 130	0.00	20

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY27121

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY27123	Solids, Dissolved	mg/L	1.00	25			2900	53.0	40 to 60		1.02	5

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY27122

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY27122

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit	
			MB	Limit									
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046	108	70 to 130	1.25	20
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115	101	70 to 130	1.60	20
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115	99.4	70 to 130	0.602	20
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115	93.8	70 to 130	2.21	20
AY27129	Cobalt, Total	mg/L	0.00000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115	106	70 to 130	1.07	20
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115	102	70 to 130	0.00	20
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115	91.8	70 to 130	1.20	20
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23	118	70 to 130	1.85	20
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115	95.8	70 to 130	3.61	20
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75	214	70 to 130	7.69	20
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115	99.8	70 to 130	0.704	20
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.995	20
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15	102	70 to 130	0.840	20
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115	102	70 to 130	5.33	20
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115	98.6	70 to 130	1.41	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY27122

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY27123	Solids, Dissolved	mg/L	1.00	25			2900	53.0	40 to 60		1.02	5

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY27123

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0114	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0624	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	288	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0208	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	J 0.0195	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	2960	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY27123

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	Limit
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit		
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046	108	70 to 130	1.25	20
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115	99.4	70 to 130	0.602	20
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115	101	70 to 130	1.60	20
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115	91.8	70 to 130	1.20	20
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23	118	70 to 130	1.85	20
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115	95.8	70 to 130	3.61	20
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75	214	70 to 130	7.69	20
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115	99.8	70 to 130	0.704	20
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115	93.8	70 to 130	2.21	20
AY27129	Cobalt, Total	mg/L	0.00000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115	106	70 to 130	1.07	20
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115	102	70 to 130	0.00	20
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.995	20
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15	102	70 to 130	0.840	20
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115	102	70 to 130	5.33	20
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115	98.6	70 to 130	1.41	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY27123

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
				Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AY27123	Solids, Dissolved	mg/L	1.00	25			2900	53.0	40 to 60			1.02	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:



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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY27124

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	J 0.00127	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0109	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0518	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	323	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0119	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0346	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	3270	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY27124

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046		108	70 to 130	1.25	20
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115		101	70 to 130	1.60	20
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115		99.4	70 to 130	0.602	20
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115		93.8	70 to 130	2.21	20
AY27129	Cobalt, Total	mg/L	0.0000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115		106	70 to 130	1.07	20
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115		102	70 to 130	0.00	20
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115		91.8	70 to 130	1.20	20
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23		118	70 to 130	1.85	20
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115		95.8	70 to 130	3.61	20
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75		214	70 to 130	7.69	20
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115		99.8	70 to 130	0.704	20
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115		100	70 to 130	0.995	20
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15		102	70 to 130	0.840	20
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115		102	70 to 130	5.33	20
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115		98.6	70 to 130	1.41	20

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY27124

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
				Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60			0.255	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY27125

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0105	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0615	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	272	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0787	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0664	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	2630	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY27125

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	Limit
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit		
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046	108	70 to 130	1.25	20
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115	99.4	70 to 130	0.602	20
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115	101	70 to 130	1.60	20
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115	91.8	70 to 130	1.20	20
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23	118	70 to 130	1.85	20
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115	95.8	70 to 130	3.61	20
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75	214	70 to 130	7.69	20
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115	99.8	70 to 130	0.704	20
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.995	20
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15	102	70 to 130	0.840	20
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115	102	70 to 130	5.33	20
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115	98.6	70 to 130	1.41	20
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115	93.8	70 to 130	2.21	20
AY27129	Cobalt, Total	mg/L	0.00000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115	106	70 to 130	1.07	20
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115	102	70 to 130	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY27125

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
				Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60			0.255	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY27126

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	J 0.00301	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0128	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0524	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	301	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0117	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	J 0.0174	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	2420	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY27126

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	Limit
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit		
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046	108	70 to 130	1.25	20
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115	101	70 to 130	1.60	20
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115	99.4	70 to 130	0.602	20
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115	91.8	70 to 130	1.20	20
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23	118	70 to 130	1.85	20
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115	95.8	70 to 130	3.61	20
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75	214	70 to 130	7.69	20
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115	99.8	70 to 130	0.704	20
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.995	20
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15	102	70 to 130	0.840	20
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115	102	70 to 130	5.33	20
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115	98.6	70 to 130	1.41	20
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115	93.8	70 to 130	2.21	20
AY27129	Cobalt, Total	mg/L	0.00000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115	106	70 to 130	1.07	20
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115	102	70 to 130	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY27126

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit	
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60			0.255	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY27127

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	J 0.00277	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0154	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0794	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	367	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.621	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0392	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	3820	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY27127

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115		99.4	70 to 130	0.602	20
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046		108	70 to 130	1.25	20
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115		91.8	70 to 130	1.20	20
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23		118	70 to 130	1.85	20
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115		93.8	70 to 130	2.21	20
AY27129	Cobalt, Total	mg/L	0.0000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115		106	70 to 130	1.07	20
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115		102	70 to 130	0.00	20
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115		95.8	70 to 130	3.61	20
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75		214	70 to 130	7.69	20
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115		99.8	70 to 130	0.704	20
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115		100	70 to 130	0.995	20
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15		102	70 to 130	0.840	20
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115		102	70 to 130	5.33	20
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115		98.6	70 to 130	1.41	20
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115		101	70 to 130	1.60	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY27127

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60			0.255	5

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Laboratory certification ID: E571114

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Expiration: June 30, 2019

**Comments:**

CC:

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY27128

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0104	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0390	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	356	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0586	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	3260	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY27128

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	Limit
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit		
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046	108	70 to 130	1.25	20
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115	99.4	70 to 130	0.602	20
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115	101	70 to 130	1.60	20
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115	91.8	70 to 130	1.20	20
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23	118	70 to 130	1.85	20
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115	93.8	70 to 130	2.21	20
AY27129	Cobalt, Total	mg/L	0.0000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115	106	70 to 130	1.07	20
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115	102	70 to 130	0.00	20
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.995	20
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15	102	70 to 130	0.840	20
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115	102	70 to 130	5.33	20
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115	98.6	70 to 130	1.41	20
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115	95.8	70 to 130	3.61	20
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75	214	70 to 130	7.69	20
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115	99.8	70 to 130	0.704	20

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY27128

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
				Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60			0.255	5

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY27129

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	J 0.00915	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0237	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	154	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	0.00156	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0825	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0241	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	2360	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Recovery for Calcium is out of spec. Spike amount is less than 30% of the sample amount. LBM 12/04/18



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY27129

Sample	Analysis	Units	MB	MB			MS	MSD	LCS	LCS		Rec	Prec	Limit
				Limit	Spike	MS				Limit	Rec			
AY27129	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.0994	0.100	0.105	0.085 to 0.115	99.4	70 to 130	0.602	20	
AY27129	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.0994	0.0965	0.085 to 0.115	101	70 to 130	1.60	20	
AY27129	Mercury, Total by CVAA	mg/L	0.000111	0.0005	0.004	0.00431	0.00436	0.00436	0.0034 to 0.0046	108	70 to 130	1.25	20	
AY27129	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.101	0.0998	0.0964	0.085 to 0.115	91.8	70 to 130	1.20	20	
AY27129	Lithium, Total	mg/L	-0.000118	0.022	0.20	0.260	0.255	0.198	0.17 to 0.23	118	70 to 130	1.85	20	
AY27129	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.0938	0.0959	0.106	0.085 to 0.115	93.8	70 to 130	2.21	20	
AY27129	Cobalt, Total	mg/L	0.0000802	0.0044	0.100	0.188	0.186	0.102	0.085 to 0.115	106	70 to 130	1.07	20	
AY27129	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.102	0.102	0.085 to 0.115	102	70 to 130	0.00	20	
AY27129	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.995	20	
AY27129	Boron, Total	mg/L	0.00122	0.044	1.00	1.04	1.04	0.992	0.85 to 1.15	102	70 to 130	0.840	20	
AY27129	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.104	0.0986	0.106	0.085 to 0.115	102	70 to 130	5.33	20	
AY27129	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0986	0.100	0.0967	0.085 to 0.115	98.6	70 to 130	1.41	20	
AY27129	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0958	0.0924	0.101	0.085 to 0.115	95.8	70 to 130	3.61	20	
AY27129	Calcium, Total	mg/L	0.00216	0.22	5.00	165	152	5.10	4.25 to 5.75	214	70 to 130	7.69	20	
AY27129	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0998	0.0991	0.0990	0.085 to 0.115	99.8	70 to 130	0.704	20	

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Recovery for Calcium is out of spec. Spike amount is less than 30% of the sample amount. LBM 12/04/18

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY27129

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60		0.255	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Recovery for Calcium is out of spec. Spike amount is less than 30% of the sample amount. LBM 12/04/18

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY27130

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0115	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0324	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	221	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0225	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0584	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		100	1990	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY27130

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AY27133	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.101	0.101	0.106	0.085 to 0.115	101	70 to 130	0.00	20
AY27133	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0951	0.0955	0.101	0.085 to 0.115	95.1	70 to 130	0.420	20
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00434	0.00420	0.0034 to 0.0046	107	70 to 130	0.911	20
AY27133	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.101	0.104	0.105	0.085 to 0.115	96.6	70 to 130	2.93	20
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23	125	70 to 130	1.40	20
AY27133	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.109	0.101	0.106	0.085 to 0.115	109	70 to 130	7.62	20
AY27133	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.00	20
AY27133	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.107	0.107	0.0964	0.085 to 0.115	96.3	70 to 130	0.00	20
AY27133	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0996	0.0996	0.0967	0.085 to 0.115	99.6	70 to 130	0.00	20
AY27133	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.101	0.0965	0.085 to 0.115	101	70 to 130	0.00	20
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15	105	70 to 130	1.28	20
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75	920	70 to 130	13.9	20
AY27133	Cobalt, Total	mg/L	0.00000802	0.0044	0.100	0.105	0.104	0.102	0.085 to 0.115	105	70 to 130	0.957	20
AY27133	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0991	0.100	0.0990	0.085 to 0.115	99.1	70 to 130	0.904	20
AY27133	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.976	20

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY27130

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60		0.255	5

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

# Certificate Of Analysis Alabama Power



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AY27131

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0137	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0294	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	220	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0222	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0582	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	1920	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AY27131

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	Limit
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit		
AY27133	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.109	0.101	0.106	0.085 to 0.115	109	70 to 130	7.62	20
AY27133	Cadmium, Total	mg/L	0.0000000	0.00066	0.100	0.101	0.101	0.106	0.085 to 0.115	101	70 to 130	0.00	20
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00434	0.00420	0.0034 to 0.0046	107	70 to 130	0.911	20
AY27133	Cobalt, Total	mg/L	0.0000802	0.0044	0.100	0.105	0.104	0.102	0.085 to 0.115	105	70 to 130	0.957	20
AY27133	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0991	0.100	0.0990	0.085 to 0.115	99.1	70 to 130	0.904	20
AY27133	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.976	20
AY27133	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0951	0.0955	0.101	0.085 to 0.115	95.1	70 to 130	0.420	20
AY27133	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.101	0.104	0.105	0.085 to 0.115	96.6	70 to 130	2.93	20
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23	125	70 to 130	1.40	20
AY27133	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.00	20
AY27133	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.107	0.107	0.0964	0.085 to 0.115	96.3	70 to 130	0.00	20
AY27133	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0996	0.0996	0.0967	0.085 to 0.115	99.6	70 to 130	0.00	20
AY27133	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.101	0.0965	0.085 to 0.115	101	70 to 130	0.00	20
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15	105	70 to 130	1.28	20
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75	920	70 to 130	13.9	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AY27131

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60			0.255	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:



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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY27132

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	J	0.00120	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01		0.0109	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003		0.0185	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J	0.0514	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15		387	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001		0.00309	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005		0.386	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02		0.323	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005		0.00692	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	J	0.00439	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	J	0.000226	mg/L
<b>General Characteristics</b>										
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		250		4710	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1				11/20/2018	Date

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Laboratory certification ID: E571114

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Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY27132

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AY27133	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0951	0.0955	0.101	0.085 to 0.115	95.1	70 to 130	0.420	20
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00434	0.00420	0.0034 to 0.0046	107	70 to 130	0.911	20
AY27133	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.109	0.101	0.106	0.085 to 0.115	109	70 to 130	7.62	20
AY27133	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.101	0.101	0.106	0.085 to 0.115	101	70 to 130	0.00	20
AY27133	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.101	0.104	0.105	0.085 to 0.115	96.6	70 to 130	2.93	20
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23	125	70 to 130	1.40	20
AY27133	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.00	20
AY27133	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.107	0.107	0.0964	0.085 to 0.115	96.3	70 to 130	0.00	20
AY27133	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0996	0.0996	0.0967	0.085 to 0.115	99.6	70 to 130	0.00	20
AY27133	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.101	0.0965	0.085 to 0.115	101	70 to 130	0.00	20
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15	105	70 to 130	1.28	20
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75	920	70 to 130	13.9	20
AY27133	Cobalt, Total	mg/L	0.00000802	0.0044	0.100	0.105	0.104	0.102	0.085 to 0.115	105	70 to 130	0.957	20
AY27133	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0991	0.100	0.0990	0.085 to 0.115	99.1	70 to 130	0.904	20
AY27133	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.976	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY27132

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60		0.255	5

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Comments:

CC:

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY27133

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0107	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0526	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	289	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0467	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	J 0.00436	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/26/2018	SM 2540C		1		125	3920	mg/L
Filter Completion Date	CRB	11/20/2018	SM 2540C		1			11/20/2018	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY27133

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AY27133	Cadmium, Total	mg/L	0.000000	0.00066	0.100	0.101	0.106	0.085 to 0.115	101	70 to 130	0.00	20	
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00420	0.0034 to 0.0046	107	70 to 130	0.911	20	
AY27133	Antimony, Total	mg/L	0.0000396	0.00176	0.100	0.0951	0.0955	0.101	0.085 to 0.115	95.1	70 to 130	0.420	20
AY27133	Beryllium, Total	mg/L	0.0000587	0.00132	0.100	0.109	0.101	0.106	0.085 to 0.115	109	70 to 130	7.62	20
AY27133	Selenium, Total	mg/L	0.0000491	0.0044	0.100	0.101	0.104	0.105	0.085 to 0.115	96.6	70 to 130	2.93	20
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23	125	70 to 130	1.40	20
AY27133	Cobalt, Total	mg/L	0.00000802	0.0044	0.100	0.105	0.104	0.102	0.085 to 0.115	105	70 to 130	0.957	20
AY27133	Lead, Total	mg/L	0.0000249	0.0022	0.100	0.0991	0.100	0.0990	0.085 to 0.115	99.1	70 to 130	0.904	20
AY27133	Thallium, Total	mg/L	0.0000117	0.00044	0.100	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.976	20
AY27133	Arsenic, Total	mg/L	0.0000137	0.0022	0.100	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.00	20
AY27133	Barium, Total	mg/L	0.0000365	0.0044	0.100	0.107	0.107	0.0964	0.085 to 0.115	96.3	70 to 130	0.00	20
AY27133	Chromium, Total	mg/L	0.0000141	0.0044	0.100	0.0996	0.0996	0.0967	0.085 to 0.115	99.6	70 to 130	0.00	20
AY27133	Molybdenum, Total	mg/L	0.0000369	0.0044	0.100	0.101	0.101	0.0965	0.085 to 0.115	101	70 to 130	0.00	20
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15	105	70 to 130	1.28	20
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75	920	70 to 130	13.9	20

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Laboratory certification ID: E571114

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**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY27133

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY27133	Solids, Dissolved	mg/L	1.00	25			3900	53.0	40 to 60		0.255	5

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Laboratory certification ID: E571114

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Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY27301

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0127	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	0.106	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	370	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.248	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		125	2480	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY27301

Sample	Analysis	Units	MB	MB			LCS			Rec			Prec Limit
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115	94.4	70 to 130	0.462	20
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115	94.9	70 to 130	2.06	20
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00434	0.00420	0.0034 to 0.0046	107	70 to 130	0.911	20
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115	97.8	70 to 130	1.78	20
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115	94.3	70 to 130	0.322	20
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115	96.1	70 to 130	0.293	20
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115	101	70 to 130	2.12	20
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115	99.2	70 to 130	1.05	20
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15	105	70 to 130	1.28	20
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75	920	70 to 130	13.9	20
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115	99.0	70 to 130	2.06	20
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115	97.9	70 to 130	1.79	20
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23	125	70 to 130	1.40	20
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115	93.7	70 to 130	2.32	20
AY27310	Beryllium, Total	mg/L	0.000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115	97.0	70 to 130	13.1	20

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY27301

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec			
				Limit			Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AY27310	Solids, Dissolved	mg/L	0.0000	25			-1.3	56.0	40 to 60			0.00	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27302

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27302

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00434	0.00420	0.0034 to 0.0046		107	70 to 130	0.911	20
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115		94.4	70 to 130	0.462	20
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115		94.9	70 to 130	2.06	20
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115		97.8	70 to 130	1.78	20
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115		94.3	70 to 130	0.322	20
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15		105	70 to 130	1.28	20
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75		920	70 to 130	13.9	20
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115		99.0	70 to 130	2.06	20
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115		97.9	70 to 130	1.79	20
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23		125	70 to 130	1.40	20
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115		93.7	70 to 130	2.32	20
AY27310	Beryllium, Total	mg/L	0.000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115		97.0	70 to 130	13.1	20
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115		96.1	70 to 130	0.293	20
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115		101	70 to 130	2.12	20
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115		99.2	70 to 130	1.05	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27302

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit	Limit
AY27310	Solids, Dissolved	mg/L	0.0000	25			-1.3	56.0	40 to 60			0.00	5

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Laboratory certification ID: E571114

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CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY27303

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0145	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	0.114	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	349	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.253	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		125	2420	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY27303

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00434	0.00420	0.0034 to 0.0046		107	70 to 130	0.911	20
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115		94.9	70 to 130	2.06	20
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115		94.4	70 to 130	0.462	20
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115		97.8	70 to 130	1.78	20
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115		94.3	70 to 130	0.322	20
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115		96.1	70 to 130	0.293	20
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115		101	70 to 130	2.12	20
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115		99.2	70 to 130	1.05	20
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23		125	70 to 130	1.40	20
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115		93.7	70 to 130	2.32	20
AY27310	Beryllium, Total	mg/L	0.000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115		97.0	70 to 130	13.1	20
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15		105	70 to 130	1.28	20
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75		920	70 to 130	13.9	20
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115		99.0	70 to 130	2.06	20
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115		97.9	70 to 130	1.79	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY27303

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
				Limit			Duplicate	LCS	Limit	Limit		Limit
AY27310	Solids, Dissolved	mg/L	0.0000	25			-1.3	56.0	40 to 60		0.00	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY27304

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	J 0.00942	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0421	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	325	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0710	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.0526	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		125	2580	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**



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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY27304

Sample	Analysis	Units	MB	MB			LCS			Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115	94.4	70 to 130	0.462	20
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115	94.9	70 to 130	2.06	20
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00434	0.00420	0.0034 to 0.0046	107	70 to 130	0.911	20
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23	125	70 to 130	1.40	20
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115	93.7	70 to 130	2.32	20
AY27310	Beryllium, Total	mg/L	0.000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115	97.0	70 to 130	13.1	20
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115	97.8	70 to 130	1.78	20
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115	94.3	70 to 130	0.322	20
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15	105	70 to 130	1.28	20
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75	920	70 to 130	13.9	20
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115	99.0	70 to 130	2.06	20
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115	97.9	70 to 130	1.79	20
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115	96.1	70 to 130	0.293	20
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115	101	70 to 130	2.12	20
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115	99.2	70 to 130	1.05	20

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY27304

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Limit	
AY27310	Solids, Dissolved	mg/L	0.0000	25			-1.3	56.0	40 to 60	0.00	5

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY27305

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0105	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0357	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	414	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.102	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		250	3780	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY27305

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115	94.9	70 to 130	2.06	20	
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00434	0.00420	0.0034 to 0.0046	107	70 to 130	0.911	20	
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115	94.4	70 to 130	0.462	20	
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115	97.8	70 to 130	1.78	20	
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115	94.3	70 to 130	0.322	20	
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115	96.1	70 to 130	0.293	20	
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115	101	70 to 130	2.12	20	
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115	99.2	70 to 130	1.05	20	
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23	125	70 to 130	1.40	20	
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115	93.7	70 to 130	2.32	20	
AY27310	Beryllium, Total	mg/L	0.0000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115	97.0	70 to 130	13.1	20	
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15	105	70 to 130	1.28	20	
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75	920	70 to 130	13.9	20	
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115	99.0	70 to 130	2.06	20	
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115	97.9	70 to 130	1.79	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

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

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY27305

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec	
				Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AY27310	Solids, Dissolved	mg/L	0.0000	25			-1.3	56.0	40 to 60			0.00	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

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

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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY27306

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	0.00542	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0127	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0915	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	449	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0327	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.245	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		250	3330	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Recovery for Calcium is out of spec. Spike amount is less than 30% of the sample amount. LBM 12/04/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY27306

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115	94.9	70 to 130	2.06	20
AY27133	Mercury, Total by CVAA	mg/L	0.0000875	0.0005	0.004	0.00430	0.00434	0.00420	0.0034 to 0.0046	107	70 to 130	0.911	20
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115	94.4	70 to 130	0.462	20
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115	97.8	70 to 130	1.78	20
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115	94.3	70 to 130	0.322	20
AY27306	Lithium, Total	mg/L	-0.000145	0.022	0.20	0.495	0.488	0.196	0.17 to 0.23	125	70 to 130	1.40	20
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115	93.7	70 to 130	2.32	20
AY27310	Beryllium, Total	mg/L	0.000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115	97.0	70 to 130	13.1	20
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115	96.1	70 to 130	0.293	20
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115	101	70 to 130	2.12	20
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115	99.2	70 to 130	1.05	20
AY27306	Boron, Total	mg/L	0.00127	0.044	1.00	1.15	1.13	0.985	0.85 to 1.15	105	70 to 130	1.28	20
AY27306	Calcium, Total	mg/L	0.00739	0.22	5.00	495	431	5.04	4.25 to 5.75	920	70 to 130	13.9	20
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115	99.0	70 to 130	2.06	20
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115	97.9	70 to 130	1.79	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Recovery for Calcium is out of spec. Spike amount is less than 30% of the sample amount. LBM 12/04/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY27306

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Prec	
AY27310	Solids, Dissolved	mg/L	0.0000	25			-1.3	56.0	40 to 60	0.00	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Recovery for Calcium is out of spec. Spike amount is less than 30% of the sample amount. LBM 12/04/18

CC:



Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6 DUP

Laboratory ID Number: AY27307

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	0.00515	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0130	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0944	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	409	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.0323	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.248	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		250	3360	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6 DUP

Laboratory ID Number: AY27307

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit	
			Limit	MB					Limit	Rec	Limit	Prec			
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115		94.4	70 to 130		0.462	20
AY27310	Calcium, Total	mg/L	0.00277	0.22	5.00	4.97	4.99	5.07	4.25 to 5.75		97.3	70 to 130		0.281	20
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115		93.7	70 to 130		2.32	20
AY27310	Beryllium, Total	mg/L	0.000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115		97.0	70 to 130		13.1	20
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115		94.9	70 to 130		2.06	20
AY27310	Boron, Total	mg/L	0.00118	0.044	1.00	0.988	0.996	1.01	0.85 to 1.15		98.8	70 to 130		0.799	20
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115		97.8	70 to 130		1.78	20
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115		94.3	70 to 130		0.322	20
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115		96.1	70 to 130		0.293	20
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115		101	70 to 130		2.12	20
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115		99.2	70 to 130		1.05	20
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115		99.0	70 to 130		2.06	20
AY27310	Lithium, Total	mg/L	-0.000196	0.022	0.20	0.199	0.202	0.200	0.17 to 0.23		99.5	70 to 130		1.56	20
AY27310	Mercury, Total by CVAA	mg/L	0.0000673	0.0005	0.004	0.00435	0.00438	0.00423	0.0034 to 0.0046		109	70 to 130		0.743	20
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115		97.9	70 to 130		1.79	20

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6 DUP

Laboratory ID Number: AY27307

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Limit	
AY27310	Solids, Dissolved	mg/L	0.0000	25			-1.3	56.0	40 to 60	0.00	5

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\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY27308

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	J 0.00133	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0116	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0772	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	306	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	J 0.00306	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.120	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		125	2090	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY27308

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit	
			Limit	MB					Limit	Rec	Limit	Prec			
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115		94.4	70 to 130		0.462	20
AY27310	Calcium, Total	mg/L	0.00277	0.22	5.00	4.97	4.99	5.07	4.25 to 5.75		97.3	70 to 130		0.281	20
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115		94.9	70 to 130		2.06	20
AY27310	Boron, Total	mg/L	0.00118	0.044	1.00	0.988	0.996	1.01	0.85 to 1.15		98.8	70 to 130		0.799	20
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115		96.1	70 to 130		0.293	20
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115		101	70 to 130		2.12	20
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115		99.2	70 to 130		1.05	20
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115		97.8	70 to 130		1.78	20
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115		94.3	70 to 130		0.322	20
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115		93.7	70 to 130		2.32	20
AY27310	Beryllium, Total	mg/L	0.0000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115		97.0	70 to 130		13.1	20
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115		99.0	70 to 130		2.06	20
AY27310	Lithium, Total	mg/L	-0.000196	0.022	0.20	0.199	0.202	0.200	0.17 to 0.23		99.5	70 to 130		1.56	20
AY27310	Mercury, Total by CVAA	mg/L	0.0000673	0.0005	0.004	0.00435	0.00438	0.00423	0.0034 to 0.0046		109	70 to 130		0.743	20
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115		97.9	70 to 130		1.79	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY27308

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Rec	Prec	Prec	Limit
								Duplicate	LCS			Limit	Limit			
AY27310	Solids, Dissolved	mg/L	0.0000		25			-1.3	56.0		40 to 60			0.00		5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY27309

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	J 0.00173	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	0.0123	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	J 0.0771	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	327	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	0.00551	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	0.181	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		125	2520	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY27309

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115	93.7	70 to 130	2.32	20
AY27310	Beryllium, Total	mg/L	0.000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115	97.0	70 to 130	13.1	20
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115	94.4	70 to 130	0.462	20
AY27310	Calcium, Total	mg/L	0.00277	0.22	5.00	4.97	4.99	5.07	4.25 to 5.75	97.3	70 to 130	0.281	20
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115	94.9	70 to 130	2.06	20
AY27310	Boron, Total	mg/L	0.00118	0.044	1.00	0.988	0.996	1.01	0.85 to 1.15	98.8	70 to 130	0.799	20
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115	97.8	70 to 130	1.78	20
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115	94.3	70 to 130	0.322	20
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115	99.0	70 to 130	2.06	20
AY27310	Lithium, Total	mg/L	-0.000196	0.022	0.20	0.199	0.202	0.200	0.17 to 0.23	99.5	70 to 130	1.56	20
AY27310	Mercury, Total by CVAA	mg/L	0.0000673	0.0005	0.004	0.00435	0.00438	0.00423	0.0034 to 0.0046	109	70 to 130	0.743	20
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115	97.9	70 to 130	1.79	20
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115	96.1	70 to 130	0.293	20
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115	101	70 to 130	2.12	20
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115	99.2	70 to 130	1.05	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**



Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY27309

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	LCS	Rec	Prec	Prec
			Limit	Limit			Duplicate	LCS	Limit	Limit	Limit	Limit
AY27310	Solids, Dissolved	mg/L	0.0000	25			-1.3	56.0	40 to 60		0.00	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27310

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	J 0.110	mg/L
* Cadmium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	11/30/2018	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	11/29/2018	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CRB	11/26/2018	SM 2540C		1			11/26/2018	Date

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\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27310

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			Limit	MB					Limit	Rec	Limit	Prec		
AY27310	Arsenic, Total	mg/L	0.0000223	0.0022	0.10	0.0949	0.0969	0.103	0.085 to 0.115		94.9	70 to 130	2.06	20
AY27310	Boron, Total	mg/L	0.00118	0.044	1.00	0.988	0.996	1.01	0.85 to 1.15		98.8	70 to 130	0.799	20
AY27310	Lead, Total	mg/L	0.0000194	0.0022	0.10	0.0978	0.0996	0.0990	0.085 to 0.115		97.8	70 to 130	1.78	20
AY27310	Molybdenum, Total	mg/L	0.0000215	0.0044	0.10	0.0943	0.0946	0.0972	0.085 to 0.115		94.3	70 to 130	0.322	20
AY27310	Chromium, Total	mg/L	0.0000193	0.0044	0.10	0.0961	0.0964	0.0992	0.085 to 0.115		96.1	70 to 130	0.293	20
AY27310	Cobalt, Total	mg/L	0.00000779	0.0044	0.10	0.101	0.0987	0.103	0.085 to 0.115		101	70 to 130	2.12	20
AY27310	Thallium, Total	mg/L	0.0000107	0.00044	0.10	0.0992	0.100	0.101	0.085 to 0.115		99.2	70 to 130	1.05	20
AY27310	Barium, Total	mg/L	0.0000370	0.0044	0.10	0.0944	0.0940	0.0945	0.085 to 0.115		94.4	70 to 130	0.462	20
AY27310	Calcium, Total	mg/L	0.00277	0.22	5.00	4.97	4.99	5.07	4.25 to 5.75		97.3	70 to 130	0.281	20
AY27310	Cadmium, Total	mg/L	-0.00000449	0.00066	0.10	0.0990	0.101	0.103	0.085 to 0.115		99.0	70 to 130	2.06	20
AY27310	Lithium, Total	mg/L	-0.000196	0.022	0.20	0.199	0.202	0.200	0.17 to 0.23		99.5	70 to 130	1.56	20
AY27310	Mercury, Total by CVAA	mg/L	0.0000673	0.0005	0.004	0.00435	0.00438	0.00423	0.0034 to 0.0046		109	70 to 130	0.743	20
AY27310	Selenium, Total	mg/L	0.0000205	0.0044	0.10	0.0979	0.0996	0.102	0.085 to 0.115		97.9	70 to 130	1.79	20
AY27310	Antimony, Total	mg/L	0.0000442	0.00176	0.10	0.0937	0.0959	0.0978	0.085 to 0.115		93.7	70 to 130	2.32	20
AY27310	Beryllium, Total	mg/L	0.000000	0.00132	0.10	0.0970	0.111	0.104	0.085 to 0.115		97.0	70 to 130	13.1	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27310

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LCS	Rec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Limit	Prec	Limit
AY27310	Solids, Dissolved	mg/L	0.0000	25			-1.3	56.0	40 to 60		0.00	5

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

## Definitions



Abbreviation	Description
DF	Dilution Factor
LCS	Lab Control Sample
LFM	Lab Fortified Matrix
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spec	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
E	Estimated reported value exceeded calibration range.
J	Reported value is an estimate because concentration is less than reporting limit.
N	Organic constituents tentatively identified. Confirmation is needed.
R	Matrix spike recovery is out of range.
U	Compound was analyzed, but not detected.
P	Precision is out of range.
C	Analyte was verified by re-analysis.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
L	Check standard is outside of the required specification limit.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
F	Water Field Group (WFG) qualifier; see comments for more information



Chain of Custody  
Groundwater  
APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA 11/19/2018 18:30

Requested Complete Date Site Representative Collector	Routine	Results To Requested By Location	Dustin Brooks,Greg Dyer
	Che George		Greg Dyer
	Nick Pitts		Gorgas Landfill

Bottles	1	Metals	500 mL	3	TDS	500 mL	5	N/A	N/A	7	N/A	N/A
	2	Hg	250 mL	4	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-10	11/19/18	12:10	3	Groundwater		AY27120
MW-12	11/19/2018	13:53	3	Groundwater		AY27121
EB-1	11/19/2018	14:40	3	Equipment Blank		AY27122

Relinquished By	Received By	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	11/19/2018 16:25
<i>[Signature]</i>	<i>[Signature]</i>	11/19/2018 18:42

SmarTroll ID	4696-23441-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20009-2-1	
Sample Event	1182	
Cooler Temp	2.1 degrees C	
Thermometer ID	5408-27568-2-2	
pH Strip ID	6959-37692-30-13	



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA 11/19/2018 18:30

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Ben Rothschild	Location	Gorgas Landfill





  

Bottles	1	Metals	500 mL	3	TDS	500 mL	5	N/A	N/A	7	N/A	N/A
	2	Hg	250 mL	4	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-13	11/19/18	09:12	3	Groundwater		AY27123
MW-14	11/19/2018	10:15	3	Groundwater		AY27124
MW-15	11/19/2018	11:19	3	Groundwater		AY27125
MW-16	11/19/2018	12:19	3	Groundwater		AY27126
MW-17R	11/19/2018	13:25	3	Groundwater		AY27127
MW-18	11/19/2018	15:15	3	Groundwater		AY27128

Relinquished By	Received By	Date/Time
		11/19/2018 16:22
		11/19/2018 18:43

SmarTroll ID	6496-34170-1-1	All metals and radiological bottles have pH < 2	<input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	Cooler Temp	0.5 degrees C
Sample Event	1182	Thermometer ID	5408-27568-2-2
		pH Strip ID	6959-37692-30-13



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA 11/19/2018 18:20

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Anthony Goggins	Location	Gorgas Landfill

Bottles	1	Metals	500 mL	3	TDS	500 mL	5	N/A	N/A	7	N/A	N/A
	2	Hg	250 mL	4	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-1	11/19/18	10:31	3	Groundwater		AY27129
MW-2	11/19/2018	11:37	3	Groundwater		AY27130
MW-2DUP	11/19/2018	11:37	3	Sample Duplicate		AY27131
MW-3	11/19/2018	13:24	3	Groundwater		AY27132
MW-4	11/19/2018	15:05	3	Groundwater		AY27133

Relinquished By	Received By	Date/Time
		11/19/2018 18:36

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> Cooler Temp <span style="border: 1px solid black; padding: 2px;">0.5 degrees C</span> Thermometer ID <span style="border: 1px solid black; padding: 2px;">5408-27568-2-2</span> pH Strip ID <span style="border: 1px solid black; padding: 2px;">6959-37692-30-13</span>
Turbidity ID	5160-26211-1-1	
Sample Event	1182	





# Chain of Custody Groundwater APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA **11/20/2018 14:00**

Requested Complete Date	Routine	Results To	Dustin Brooks,Greg Dyer		
	Site Representative		Che George	Requested By	Greg Dyer
	Collector		Nick Pitts		Location

Bottles	1	Metals	500 mL	3	TDS	500 mL	5	N/A	N/A	7	N/A	N/A
	2	Hg	250 mL	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-11	11/20/18	09:05	3	Groundwater		AY27301
FB-1	11/20/2018	09:37	3	Field Blank		AY27302
MW-20	11/20/2018	10:30	3	Groundwater		AY27303
MW-19	11/20/2018	11:54	3	Groundwater		AY27304

Relinquished By	Received By	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	11/20/2018 14:18

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>		
Turbidity ID	3901-20009-2-1		Cooler Temp	0.3 degrees C
Sample Event	1182		Thermometer ID	5408-27568-2-2
			pH Strip ID	6959-37692-30-13



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA 11/20/2018 15:00

Requested Complete Date Site Representative Collector	Routine	Results To Requested By Location	Dustin Brooks,Greg Dyer
	Che George		Greg Dyer
	Ben Rothschadl		Gorgas Landfill

Bottles	1	Metals	500 mL	3	TDS	500 mL	5	N/A	N/A	7	N/A	N/A
	2	Hg	250 mL	4	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	11/20/18	08:28	3	Groundwater		AY27305
MW-6	11/20/2018	09:43	3	Groundwater		AY27306
MW-6 DUP	11/20/2018	09:43	3	Sample Duplicate		AY27307
MW-7	11/20/2018	10:52	3	Groundwater		AY27308
MW-8	11/20/2018	12:09	3	Groundwater		AY27309
FB-2	11/20/2018	12:50	3	Field Blank		AY27310

Relinquished By	Received By	Date/Time
		11/20/2018 14:51

SmarTroll ID	6496-34170-1-1
Turbidity ID	4677-23342-4-1
Sample Event	1182

All metals and radiological bottles have pH < 2

Cooler Temp	0.3 degrees C
Thermometer ID	5408-7568-2-2
pH Strip ID	6959-37692-30-13



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA 11/19/2018 18:30

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Nick Pitts	Location	Gorgas Landfill

Bottles	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	Anions	250 mL	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-10	11/19/18	12:10	2	Groundwater		AY27134
MW-12	11/19/2018	13:53	2	Groundwater		AY27135
EB-1	11/19/2018	14:40	2	Equipment Blank		AY27136

Relinquished By	Received By	Date/Time
		11/19/2018 16:25
		11/19/2018 18:39

SmarTroll ID	4696-23441-1-1
Turbidity ID	3901-20009-2-1
Sample Event	1182

All metals and radiological bottles have pH < 2

Cooler Temp	2.1 degrees C
Thermometer ID	5408-27568-2-2
pH Strip ID	6959-37692-30-13



**Chain of Custody**  
**Groundwater**  
 APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA **11/19/2018 18:30**

Requested Complete Date	Routine		Results To	Dustin Brooks, Greg Dyer		
	Che George			Requested By		Greg Dyer
	Collector		Ben Rothschild		Location	

Bottles	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	Anions	250 mL	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments	Radium Duplicate Collected at MW-14
----------	-------------------------------------

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	11/19/18	09:12	2	Groundwater		AY27137
MW-14	11/19/2018	10:15	4	Groundwater		AY27138
MW-15	11/19/2018	11:19	2	Groundwater		AY27139
MW-16	11/19/2018	12:19	2	Groundwater		AY27140
MW-17R	11/19/2018	13:25	2	Groundwater		AY27141
MW-18	11/19/2018	15:15	2	Groundwater		AY27142

Relinquished By	Received By	Date/Time
		11/19/2018 16:22
		11/19/2018 18:44

SmarTroll ID	6496-34170-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	4677-23342-4-1		
Sample Event	1182	Cooler Temp	0.5 degrees C
		Thermometer ID	5408-27568-2-2
		pH Strip ID	6959-37692-30-13



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA 11/19/2018 18:22

Requested Complete Date	Routine		Results To	Dustin Brooks, Greg Dyer		
	Che George			Requested By	Greg Dyer	
	Collector Anthony Goggins				Location Gorgas Landfill	

Bottles	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	Anions	250 mL	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments: Radium Duplicate collected MW-1

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	11/19/18	10:31	4	Groundwater		AY27143
MW-2	11/19/2018	11:37	2	Groundwater		AY27144
MW-2DUP	11/19/2018	11:37	2	Sample Duplicate		AY27145
MW-3	11/19/2018	13:24	2	Groundwater		AY27146
MW-4	11/19/2018	15:05	2	Groundwater		AY27147

Relinquished By	Received By	Date/Time
<i>Anthony Goggins</i>	<i>Greg Dyer</i>	11/19/2018 18:38

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>		
Turbidity ID	5160-26211-1-1		Cooler Temp	0.5 degrees C
Sample Event	1182		Thermometer ID	5408-27568-2-2
			pH Strip ID	6959-37692-30-13



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA 11/20/2018 14:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Nick Pitts	Location	Gorgas Landfill

Bottles	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	Anions	250 mL	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-11	11/20/18	09:05	2	Groundwater		AY27311
FB-1	11/20/2018	09:37	2	Field Blank		AY27312
MW-20	11/20/2018	10:30	2	Groundwater		AY27313
MW-19	11/20/2018	11:54	2	Groundwater		AY27314

Relinquished By	Received By	Date/Time
		11/20/2018 14:17

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>		
Turbidity ID	3901-20009-2-1		Cooler Temp	0.3 degrees C
Sample Event	1182		Thermometer ID	5408-27568-2-2
			pH Strip ID	6959-37692-30-13



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA 11/20/2018 15:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Ben Rothschild	Location	Gorgas Landfill

Bottles	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	Anions	250 mL	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	11/20/18	08:28	2	Groundwater		AY27315
MW-6	11/20/2018	09:43	2	Groundwater		AY27316
MW-6 DUP	11/20/2018	09:43	2	Sample Duplicate		AY27317
MW-7	11/20/2018	10:52	2	Groundwater		AY27318
MW-8	11/20/2018	12:09	2	Groundwater		AY27319
FB-2	11/20/2018	12:50	2	Field Blank		AY27320

Relinquished By	Received By	Date/Time
		11/20/2018 14:51

SmarTroll ID	6496-34170-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	Cooler Temp
Sample Event	1182	Thermometer ID
		pH Strip ID
		0.3 degrees C
		5408-27568-2-2
		6959-37692-30-13

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-162459-1

TestAmerica Sample Delivery Group: Gorgas Landfill 1182

Client Project/Site: CCR Plant Gorgas

Revision: 1

For:

Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Laura Midkiff



Authorized for release by:

12/7/2018 6:08:41 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

**Job ID: 400-162459-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-162459-1

#### General Chemistry

Method(s) SM 4500 F C: The sample duplicate precision for the following sample associated with analytical batch 421601 was outside control limits: (400-162459-A-9 DU). The associated Laboratory Control Sample(LCS)met acceptance criteria.

Method(s) SM 4500 Cl- E: Due to the concentration of chlorides in the parent sample the MS/MSD were diluted after the spike. The spike amount was adjusted by the dilution factor. (400-162459-A-15 MS) and (400-162459-A-15 MSD)

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AY27311 MW-11 (400-162459-15), (400-162459-A-15 MS) and (400-162459-A-15 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-162459-A-1 MS) and (400-162459-A-1 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 421795 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-162459-A-14 MS) and (400-162459-A-14 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 422107 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AY27134 MW-10 (400-162459-1), (400-162459-A-1 MS), (400-162459-A-1 MSD), AY27135 MW-12 (400-162459-2), AY27137 MW-13 (400-162459-4), AY27138 MW-14 (400-162459-5), AY27139 MW-15 (400-162459-6), AY27140 MW-16 (400-162459-7), AY27141 MW-17R (400-162459-8), AY27142 MW-18 (400-162459-9), AY27143 MW-1 (400-162459-10), AY27144 MW-2 (400-162459-11), AY27145 MW-2 DUP (400-162459-12), AY27146 MW-3 (400-162459-13), AY27147 MW-4 (400-162459-14), AY27311 MW-11 (400-162459-15), AY27313 MW-20 (400-162459-17), AY27314 MW-19 (400-162459-18), AY27315 MW-5 (400-162459-19), AY27316 MW-6 (400-162459-20), AY27317 MW-6 DUP (400-162459-21), (400-162459-A-14 MS), (400-162459-A-14 MSD), AY27318 MW-7 (400-162459-22) and AY27319 MW-8 (400-162459-23). Elevated reporting limits (RLs) are provided.

# Detection Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

## Client Sample ID: AY27134 MW-10

## Lab Sample ID: 400-162459-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.8		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.26		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	720		150	42	mg/L	30		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27135 MW-12

## Lab Sample ID: 400-162459-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.1		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.16		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2100		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27136 EB-1

## Lab Sample ID: 400-162459-3

No Detections.

## Client Sample ID: AY27137 MW-13

## Lab Sample ID: 400-162459-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6	J	2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.20		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27138 MW-14

## Lab Sample ID: 400-162459-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1900		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27139 MW-15

## Lab Sample ID: 400-162459-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.34		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1500		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27140 MW-16

## Lab Sample ID: 400-162459-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.7		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.17		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1200		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27141 MW-17R

## Lab Sample ID: 400-162459-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.9		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.16		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2200		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27142 MW-18

## Lab Sample ID: 400-162459-9

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

## Client Sample ID: AY27142 MW-18 (Continued)

Lab Sample ID: 400-162459-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.30		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27143 MW-1

Lab Sample ID: 400-162459-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.7	J	2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.15		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1300		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27144 MW-2

Lab Sample ID: 400-162459-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.0		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.18		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1000		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27145 MW-2 DUP

Lab Sample ID: 400-162459-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.18		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1200		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27146 MW-3

Lab Sample ID: 400-162459-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.31		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	3000		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27147 MW-4

Lab Sample ID: 400-162459-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.36		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2400		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27311 MW-11

Lab Sample ID: 400-162459-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	59		4.0	2.8	mg/L	2		SM 4500 Cl- E	Total/NA
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27312 FB-1

Lab Sample ID: 400-162459-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1.5	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27313 MW-20

Lab Sample ID: 400-162459-17

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

## Client Sample ID: AY27313 MW-20 (Continued)

## Lab Sample ID: 400-162459-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	43		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.12		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1500		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27314 MW-19

## Lab Sample ID: 400-162459-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8	J	2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.28		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1700		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27315 MW-5

## Lab Sample ID: 400-162459-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.4		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.32		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2500		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27316 MW-6

## Lab Sample ID: 400-162459-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.7		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.14		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2200		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27317 MW-6 DUP

## Lab Sample ID: 400-162459-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.7		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2100		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27318 MW-7

## Lab Sample ID: 400-162459-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.19		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1100		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27319 MW-8

## Lab Sample ID: 400-162459-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	45		2.0	1.4	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.21		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY27320 FB-2

## Lab Sample ID: 400-162459-24

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

Method	Method Description	Protocol	Laboratory
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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# Sample Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162459-1	AY27134 MW-10	Water	11/19/18 12:10	11/21/18 10:15
400-162459-2	AY27135 MW-12	Water	11/19/18 13:53	11/21/18 10:15
400-162459-3	AY27136 EB-1	Water	11/19/18 14:40	11/21/18 10:15
400-162459-4	AY27137 MW-13	Water	11/19/18 09:12	11/21/18 10:15
400-162459-5	AY27138 MW-14	Water	11/19/18 10:15	11/21/18 10:15
400-162459-6	AY27139 MW-15	Water	11/19/18 11:19	11/21/18 10:15
400-162459-7	AY27140 MW-16	Water	11/19/18 12:19	11/21/18 10:15
400-162459-8	AY27141 MW-17R	Water	11/19/18 13:25	11/21/18 10:15
400-162459-9	AY27142 MW-18	Water	11/19/18 15:15	11/21/18 10:15
400-162459-10	AY27143 MW-1	Water	11/19/18 10:31	11/21/18 10:15
400-162459-11	AY27144 MW-2	Water	11/19/18 11:37	11/21/18 10:15
400-162459-12	AY27145 MW-2 DUP	Water	11/19/18 11:37	11/21/18 10:15
400-162459-13	AY27146 MW-3	Water	11/19/18 13:24	11/21/18 10:15
400-162459-14	AY27147 MW-4	Water	11/19/18 15:05	11/21/18 10:15
400-162459-15	AY27311 MW-11	Water	11/20/18 09:05	11/21/18 10:15
400-162459-16	AY27312 FB-1	Water	11/20/18 09:37	11/21/18 10:15
400-162459-17	AY27313 MW-20	Water	11/20/18 10:30	11/21/18 10:15
400-162459-18	AY27314 MW-19	Water	11/20/18 11:54	11/21/18 10:15
400-162459-19	AY27315 MW-5	Water	11/20/18 08:28	11/21/18 10:15
400-162459-20	AY27316 MW-6	Water	11/20/18 09:43	11/21/18 10:15
400-162459-21	AY27317 MW-6 DUP	Water	11/20/18 09:43	11/21/18 10:15
400-162459-22	AY27318 MW-7	Water	11/20/18 10:52	11/21/18 10:15
400-162459-23	AY27319 MW-8	Water	11/20/18 12:09	11/21/18 10:15
400-162459-24	AY27320 FB-2	Water	11/20/18 12:50	11/21/18 10:15

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27134 MW-10**

**Lab Sample ID: 400-162459-1**

Date Collected: 11/19/18 12:10

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.8		2.0	1.4	mg/L			12/04/18 11:12	1
Fluoride	0.26		0.10	0.032	mg/L			12/01/18 09:31	1
Sulfate	720		150	42	mg/L			12/03/18 11:13	30

**Client Sample ID: AY27135 MW-12**

**Lab Sample ID: 400-162459-2**

Date Collected: 11/19/18 13:53

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.1		2.0	1.4	mg/L			12/04/18 11:12	1
Fluoride	0.16		0.10	0.032	mg/L			12/01/18 09:37	1
Sulfate	2100		500	140	mg/L			12/05/18 17:34	100

**Client Sample ID: AY27136 EB-1**

**Lab Sample ID: 400-162459-3**

Date Collected: 11/19/18 14:40

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 11:14	1
Fluoride	<0.032		0.10	0.032	mg/L			12/01/18 09:41	1
Sulfate	<1.4		5.0	1.4	mg/L			12/05/18 15:08	1

**Client Sample ID: AY27137 MW-13**

**Lab Sample ID: 400-162459-4**

Date Collected: 11/19/18 09:12

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6	J	2.0	1.4	mg/L			12/04/18 11:15	1
Fluoride	0.20		0.10	0.032	mg/L			12/01/18 09:44	1
Sulfate	1800		500	140	mg/L			12/05/18 17:34	100

**Client Sample ID: AY27138 MW-14**

**Lab Sample ID: 400-162459-5**

Date Collected: 11/19/18 10:15

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 11:15	1
Fluoride	0.25		0.10	0.032	mg/L			12/01/18 09:46	1
Sulfate	1900		500	140	mg/L			12/05/18 17:34	100



# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27139 MW-15**

**Lab Sample ID: 400-162459-6**

Date Collected: 11/19/18 11:19

Matrix: Water

Date Received: 11/21/18 10:15

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 11:15	1
Fluoride	0.34		0.10	0.032	mg/L			12/01/18 09:48	1
Sulfate	1500		500	140	mg/L			12/05/18 17:34	100

**Client Sample ID: AY27140 MW-16**

**Lab Sample ID: 400-162459-7**

Date Collected: 11/19/18 12:19

Matrix: Water

Date Received: 11/21/18 10:15

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.7		2.0	1.4	mg/L			12/04/18 11:15	1
Fluoride	0.17		0.10	0.032	mg/L			12/01/18 09:50	1
Sulfate	1200		500	140	mg/L			12/05/18 17:38	100

**Client Sample ID: AY27141 MW-17R**

**Lab Sample ID: 400-162459-8**

Date Collected: 11/19/18 13:25

Matrix: Water

Date Received: 11/21/18 10:15

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.9		2.0	1.4	mg/L			12/04/18 11:15	1
Fluoride	0.16		0.10	0.032	mg/L			12/01/18 09:53	1
Sulfate	2200		500	140	mg/L			12/05/18 17:38	100

**Client Sample ID: AY27142 MW-18**

**Lab Sample ID: 400-162459-9**

Date Collected: 11/19/18 15:15

Matrix: Water

Date Received: 11/21/18 10:15

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 11:15	1
Fluoride	0.30		0.10	0.032	mg/L			12/01/18 10:05	1
Sulfate	1800		500	140	mg/L			12/05/18 17:38	100

**Client Sample ID: AY27143 MW-1**

**Lab Sample ID: 400-162459-10**

Date Collected: 11/19/18 10:31

Matrix: Water

Date Received: 11/21/18 10:15

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.7	J	2.0	1.4	mg/L			12/04/18 11:21	1
Fluoride	0.15		0.10	0.032	mg/L			12/01/18 10:12	1
Sulfate	1300		500	140	mg/L			12/05/18 17:38	100

**Client Sample ID: AY27144 MW-2**

**Lab Sample ID: 400-162459-11**

Date Collected: 11/19/18 11:37

Matrix: Water

Date Received: 11/21/18 10:15

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.0		2.0	1.4	mg/L			12/04/18 11:15	1

TestAmerica Pensacola

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27144 MW-2**

**Lab Sample ID: 400-162459-11**

Date Collected: 11/19/18 11:37

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.18		0.10	0.032	mg/L			12/01/18 10:16	1
Sulfate	1000		500	140	mg/L			12/05/18 17:43	100

**Client Sample ID: AY27145 MW-2 DUP**

**Lab Sample ID: 400-162459-12**

Date Collected: 11/19/18 11:37

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		2.0	1.4	mg/L			12/04/18 11:21	1
Fluoride	0.18		0.10	0.032	mg/L			12/01/18 10:18	1
Sulfate	1200		500	140	mg/L			12/05/18 17:47	100

**Client Sample ID: AY27146 MW-3**

**Lab Sample ID: 400-162459-13**

Date Collected: 11/19/18 13:24

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 11:22	1
Fluoride	0.31		0.10	0.032	mg/L			12/01/18 10:22	1
Sulfate	3000		500	140	mg/L			12/05/18 17:47	100

**Client Sample ID: AY27147 MW-4**

**Lab Sample ID: 400-162459-14**

Date Collected: 11/19/18 15:05

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 11:22	1
Fluoride	0.36		0.10	0.032	mg/L			12/01/18 10:24	1
Sulfate	2400		500	140	mg/L			12/05/18 17:43	100

**Client Sample ID: AY27311 MW-11**

**Lab Sample ID: 400-162459-15**

Date Collected: 11/20/18 09:05

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59		4.0	2.8	mg/L			12/04/18 14:47	2
Fluoride	0.10		0.10	0.032	mg/L			12/01/18 10:26	1
Sulfate	1400		500	140	mg/L			12/05/18 17:47	100

**Client Sample ID: AY27312 FB-1**

**Lab Sample ID: 400-162459-16**

Date Collected: 11/20/18 09:37

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 14:15	1
Fluoride	<0.032		0.10	0.032	mg/L			12/01/18 10:30	1

TestAmerica Pensacola

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27312 FB-1**

**Lab Sample ID: 400-162459-16**

Date Collected: 11/20/18 09:37

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.5	J	5.0	1.4	mg/L			12/05/18 15:19	1

**Client Sample ID: AY27313 MW-20**

**Lab Sample ID: 400-162459-17**

Date Collected: 11/20/18 10:30

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43		2.0	1.4	mg/L			12/04/18 14:15	1
Fluoride	0.12		0.10	0.032	mg/L			12/01/18 10:33	1
Sulfate	1500		500	140	mg/L			12/05/18 17:47	100

**Client Sample ID: AY27314 MW-19**

**Lab Sample ID: 400-162459-18**

Date Collected: 11/20/18 11:54

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	1.4	mg/L			12/04/18 14:15	1
Fluoride	0.28		0.10	0.032	mg/L			12/01/18 12:03	1
Sulfate	1700		500	140	mg/L			12/05/18 17:51	100

**Client Sample ID: AY27315 MW-5**

**Lab Sample ID: 400-162459-19**

Date Collected: 11/20/18 08:28

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.4		2.0	1.4	mg/L			12/04/18 14:15	1
Fluoride	0.32		0.10	0.032	mg/L			12/01/18 12:12	1
Sulfate	2500		500	140	mg/L			12/05/18 17:51	100

**Client Sample ID: AY27316 MW-6**

**Lab Sample ID: 400-162459-20**

Date Collected: 11/20/18 09:43

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		2.0	1.4	mg/L			12/04/18 14:15	1
Fluoride	0.14		0.10	0.032	mg/L			12/01/18 12:15	1
Sulfate	2200		500	140	mg/L			12/05/18 17:51	100

**Client Sample ID: AY27317 MW-6 DUP**

**Lab Sample ID: 400-162459-21**

Date Collected: 11/20/18 09:43

Matrix: Water

Date Received: 11/21/18 10:15

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		2.0	1.4	mg/L			12/04/18 14:15	1
Fluoride	0.13		0.10	0.032	mg/L			12/01/18 12:17	1
Sulfate	2100		500	140	mg/L			12/05/18 17:51	100

TestAmerica Pensacola

# Client Sample Results

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

**Client Sample ID: AY27318 MW-7**

**Lab Sample ID: 400-162459-22**

Date Collected: 11/20/18 10:52

Matrix: Water

Date Received: 11/21/18 10:15

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		2.0	1.4	mg/L			12/04/18 14:22	1
Fluoride	0.19		0.10	0.032	mg/L			12/01/18 12:19	1
Sulfate	1100		500	140	mg/L			12/06/18 09:54	100

**Client Sample ID: AY27319 MW-8**

**Lab Sample ID: 400-162459-23**

Date Collected: 11/20/18 12:09

Matrix: Water

Date Received: 11/21/18 10:15

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45		2.0	1.4	mg/L			12/04/18 14:22	1
Fluoride	0.21		0.10	0.032	mg/L			12/01/18 12:21	1
Sulfate	1400		500	140	mg/L			12/06/18 09:54	100

**Client Sample ID: AY27320 FB-2**

**Lab Sample ID: 400-162459-24**

Date Collected: 11/20/18 12:50

Matrix: Water

Date Received: 11/21/18 10:15

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 14:22	1
Fluoride	<0.032		0.10	0.032	mg/L			12/01/18 12:25	1
Sulfate	<1.4		5.0	1.4	mg/L			12/06/18 09:26	1

# Definitions/Glossary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

## Qualifiers

### General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F3	Duplicate RPD exceeds the control limit

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

**Client Sample ID: AY27134 MW-10**

**Lab Sample ID: 400-162459-1**

**Date Collected: 11/19/18 12:10**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 09:31	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	421795	12/03/18 11:13	RRC	TAL PEN

**Client Sample ID: AY27135 MW-12**

**Lab Sample ID: 400-162459-2**

**Date Collected: 11/19/18 13:53**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 09:37	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:34	RRC	TAL PEN

**Client Sample ID: AY27136 EB-1**

**Lab Sample ID: 400-162459-3**

**Date Collected: 11/19/18 14:40**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 09:41	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	422107	12/05/18 15:08	RRC	TAL PEN

**Client Sample ID: AY27137 MW-13**

**Lab Sample ID: 400-162459-4**

**Date Collected: 11/19/18 09:12**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 09:44	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:34	RRC	TAL PEN

**Client Sample ID: AY27138 MW-14**

**Lab Sample ID: 400-162459-5**

**Date Collected: 11/19/18 10:15**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 09:46	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:34	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27139 MW-15**

**Lab Sample ID: 400-162459-6**

**Date Collected: 11/19/18 11:19**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 09:48	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:34	RRC	TAL PEN

**Client Sample ID: AY27140 MW-16**

**Lab Sample ID: 400-162459-7**

**Date Collected: 11/19/18 12:19**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 09:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:38	RRC	TAL PEN

**Client Sample ID: AY27141 MW-17R**

**Lab Sample ID: 400-162459-8**

**Date Collected: 11/19/18 13:25**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 09:53	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:38	RRC	TAL PEN

**Client Sample ID: AY27142 MW-18**

**Lab Sample ID: 400-162459-9**

**Date Collected: 11/19/18 15:15**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 10:05	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:38	RRC	TAL PEN

**Client Sample ID: AY27143 MW-1**

**Lab Sample ID: 400-162459-10**

**Date Collected: 11/19/18 10:31**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:21	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 10:12	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:38	RRC	TAL PEN

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

**Client Sample ID: AY27144 MW-2**

**Lab Sample ID: 400-162459-11**

**Date Collected: 11/19/18 11:37**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 10:16	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:43	RRC	TAL PEN

**Client Sample ID: AY27145 MW-2 DUP**

**Lab Sample ID: 400-162459-12**

**Date Collected: 11/19/18 11:37**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:21	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 10:18	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:47	RRC	TAL PEN

**Client Sample ID: AY27146 MW-3**

**Lab Sample ID: 400-162459-13**

**Date Collected: 11/19/18 13:24**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:22	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 10:22	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:47	RRC	TAL PEN

**Client Sample ID: AY27147 MW-4**

**Lab Sample ID: 400-162459-14**

**Date Collected: 11/19/18 15:05**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421884	12/04/18 11:22	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 10:24	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:43	RRC	TAL PEN

**Client Sample ID: AY27311 MW-11**

**Lab Sample ID: 400-162459-15**

**Date Collected: 11/20/18 09:05**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		2	421942	12/04/18 14:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 10:26	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:47	RRC	TAL PEN

TestAmerica Pensacola



# Lab Chronicle

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27312 FB-1**

**Lab Sample ID: 400-162459-16**

**Date Collected: 11/20/18 09:37**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421942	12/04/18 14:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 10:30	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	422107	12/05/18 15:19	RRC	TAL PEN

**Client Sample ID: AY27313 MW-20**

**Lab Sample ID: 400-162459-17**

**Date Collected: 11/20/18 10:30**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421942	12/04/18 14:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421601	12/01/18 10:33	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:47	RRC	TAL PEN

**Client Sample ID: AY27314 MW-19**

**Lab Sample ID: 400-162459-18**

**Date Collected: 11/20/18 11:54**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421942	12/04/18 14:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421610	12/01/18 12:03	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:51	RRC	TAL PEN

**Client Sample ID: AY27315 MW-5**

**Lab Sample ID: 400-162459-19**

**Date Collected: 11/20/18 08:28**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421942	12/04/18 14:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421610	12/01/18 12:12	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:51	RRC	TAL PEN

**Client Sample ID: AY27316 MW-6**

**Lab Sample ID: 400-162459-20**

**Date Collected: 11/20/18 09:43**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421942	12/04/18 14:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421610	12/01/18 12:15	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:51	RRC	TAL PEN

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

**Client Sample ID: AY27317 MW-6 DUP**

**Lab Sample ID: 400-162459-21**

**Date Collected: 11/20/18 09:43**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421942	12/04/18 14:15	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421610	12/01/18 12:17	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422107	12/05/18 17:51	RRC	TAL PEN

**Client Sample ID: AY27318 MW-7**

**Lab Sample ID: 400-162459-22**

**Date Collected: 11/20/18 10:52**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421942	12/04/18 14:22	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421610	12/01/18 12:19	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422145	12/06/18 09:54	RRC	TAL PEN

**Client Sample ID: AY27319 MW-8**

**Lab Sample ID: 400-162459-23**

**Date Collected: 11/20/18 12:09**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421942	12/04/18 14:22	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421610	12/01/18 12:21	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	422145	12/06/18 09:54	RRC	TAL PEN

**Client Sample ID: AY27320 FB-2**

**Lab Sample ID: 400-162459-24**

**Date Collected: 11/20/18 12:50**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	421942	12/04/18 14:22	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	421610	12/01/18 12:25	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	422145	12/06/18 09:26	RRC	TAL PEN

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# QC Association Summary

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

## General Chemistry

### Analysis Batch: 421601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-1	AY27134 MW-10	Total/NA	Water	SM 4500 F C	
400-162459-2	AY27135 MW-12	Total/NA	Water	SM 4500 F C	
400-162459-3	AY27136 EB-1	Total/NA	Water	SM 4500 F C	
400-162459-4	AY27137 MW-13	Total/NA	Water	SM 4500 F C	
400-162459-5	AY27138 MW-14	Total/NA	Water	SM 4500 F C	
400-162459-6	AY27139 MW-15	Total/NA	Water	SM 4500 F C	
400-162459-7	AY27140 MW-16	Total/NA	Water	SM 4500 F C	
400-162459-8	AY27141 MW-17R	Total/NA	Water	SM 4500 F C	
400-162459-9	AY27142 MW-18	Total/NA	Water	SM 4500 F C	
400-162459-10	AY27143 MW-1	Total/NA	Water	SM 4500 F C	
400-162459-11	AY27144 MW-2	Total/NA	Water	SM 4500 F C	
400-162459-12	AY27145 MW-2 DUP	Total/NA	Water	SM 4500 F C	
400-162459-13	AY27146 MW-3	Total/NA	Water	SM 4500 F C	
400-162459-14	AY27147 MW-4	Total/NA	Water	SM 4500 F C	
400-162459-15	AY27311 MW-11	Total/NA	Water	SM 4500 F C	
400-162459-16	AY27312 FB-1	Total/NA	Water	SM 4500 F C	
400-162459-17	AY27313 MW-20	Total/NA	Water	SM 4500 F C	
MB 400-421601/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-421601/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-162459-1 MS	AY27134 MW-10	Total/NA	Water	SM 4500 F C	
400-162459-1 MSD	AY27134 MW-10	Total/NA	Water	SM 4500 F C	
400-162459-9 DU	AY27142 MW-18	Total/NA	Water	SM 4500 F C	

### Analysis Batch: 421610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-18	AY27314 MW-19	Total/NA	Water	SM 4500 F C	
400-162459-19	AY27315 MW-5	Total/NA	Water	SM 4500 F C	
400-162459-20	AY27316 MW-6	Total/NA	Water	SM 4500 F C	
400-162459-21	AY27317 MW-6 DUP	Total/NA	Water	SM 4500 F C	
400-162459-22	AY27318 MW-7	Total/NA	Water	SM 4500 F C	
400-162459-23	AY27319 MW-8	Total/NA	Water	SM 4500 F C	
400-162459-24	AY27320 FB-2	Total/NA	Water	SM 4500 F C	
MB 400-421610/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-421610/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-162459-18 MS	AY27314 MW-19	Total/NA	Water	SM 4500 F C	
400-162459-18 MSD	AY27314 MW-19	Total/NA	Water	SM 4500 F C	
400-162638-D-3 DU	Duplicate	Total/NA	Water	SM 4500 F C	

### Analysis Batch: 421795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-1	AY27134 MW-10	Total/NA	Water	SM 4500 SO4 E	
MB 400-421795/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-421795/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-421795/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-162459-1 MS	AY27134 MW-10	Total/NA	Water	SM 4500 SO4 E	
400-162459-1 MSD	AY27134 MW-10	Total/NA	Water	SM 4500 SO4 E	

### Analysis Batch: 421884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-1	AY27134 MW-10	Total/NA	Water	SM 4500 Cl- E	
400-162459-2	AY27135 MW-12	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Pensacola

# QC Association Summary

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

## General Chemistry (Continued)

### Analysis Batch: 421884 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-3	AY27136 EB-1	Total/NA	Water	SM 4500 Cl- E	
400-162459-4	AY27137 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-162459-5	AY27138 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-162459-6	AY27139 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-162459-7	AY27140 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-162459-8	AY27141 MW-17R	Total/NA	Water	SM 4500 Cl- E	
400-162459-9	AY27142 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-162459-10	AY27143 MW-1	Total/NA	Water	SM 4500 Cl- E	
400-162459-11	AY27144 MW-2	Total/NA	Water	SM 4500 Cl- E	
400-162459-12	AY27145 MW-2 DUP	Total/NA	Water	SM 4500 Cl- E	
400-162459-13	AY27146 MW-3	Total/NA	Water	SM 4500 Cl- E	
400-162459-14	AY27147 MW-4	Total/NA	Water	SM 4500 Cl- E	
MB 400-421884/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-421884/41	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-421884/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-162459-1 MS	AY27134 MW-10	Total/NA	Water	SM 4500 Cl- E	
400-162459-1 MSD	AY27134 MW-10	Total/NA	Water	SM 4500 Cl- E	
400-162459-11 MS	AY27144 MW-2	Total/NA	Water	SM 4500 Cl- E	
400-162459-11 MSD	AY27144 MW-2	Total/NA	Water	SM 4500 Cl- E	

### Analysis Batch: 421942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-15	AY27311 MW-11	Total/NA	Water	SM 4500 Cl- E	
400-162459-16	AY27312 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-162459-17	AY27313 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-162459-18	AY27314 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-162459-19	AY27315 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-162459-20	AY27316 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-162459-21	AY27317 MW-6 DUP	Total/NA	Water	SM 4500 Cl- E	
400-162459-22	AY27318 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-162459-23	AY27319 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-162459-24	AY27320 FB-2	Total/NA	Water	SM 4500 Cl- E	
MB 400-421942/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-421942/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-421942/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-162459-15 MS	AY27311 MW-11	Total/NA	Water	SM 4500 Cl- E	
400-162459-15 MSD	AY27311 MW-11	Total/NA	Water	SM 4500 Cl- E	

### Analysis Batch: 422107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-2	AY27135 MW-12	Total/NA	Water	SM 4500 SO4 E	
400-162459-3	AY27136 EB-1	Total/NA	Water	SM 4500 SO4 E	
400-162459-4	AY27137 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-162459-5	AY27138 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-162459-6	AY27139 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-162459-7	AY27140 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-162459-8	AY27141 MW-17R	Total/NA	Water	SM 4500 SO4 E	
400-162459-9	AY27142 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-162459-10	AY27143 MW-1	Total/NA	Water	SM 4500 SO4 E	
400-162459-11	AY27144 MW-2	Total/NA	Water	SM 4500 SO4 E	
400-162459-12	AY27145 MW-2 DUP	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

# QC Association Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
SDG: Gorgas Landfill 1182

## General Chemistry (Continued)

### Analysis Batch: 422107 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-13	AY27146 MW-3	Total/NA	Water	SM 4500 SO4 E	
400-162459-14	AY27147 MW-4	Total/NA	Water	SM 4500 SO4 E	
400-162459-15	AY27311 MW-11	Total/NA	Water	SM 4500 SO4 E	
400-162459-16	AY27312 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-162459-17	AY27313 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-162459-18	AY27314 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-162459-19	AY27315 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-162459-20	AY27316 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-162459-21	AY27317 MW-6 DUP	Total/NA	Water	SM 4500 SO4 E	
MB 400-422107/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-422107/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-422107/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-162459-3 MS	AY27136 EB-1	Total/NA	Water	SM 4500 SO4 E	
400-162459-3 MSD	AY27136 EB-1	Total/NA	Water	SM 4500 SO4 E	
400-162459-14 MS	AY27147 MW-4	Total/NA	Water	SM 4500 SO4 E	
400-162459-14 MSD	AY27147 MW-4	Total/NA	Water	SM 4500 SO4 E	

### Analysis Batch: 422145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-22	AY27318 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-162459-23	AY27319 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-162459-24	AY27320 FB-2	Total/NA	Water	SM 4500 SO4 E	
MB 400-422145/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-422145/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-422145/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-162738-D-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-162738-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-162774-F-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-162774-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 400-421884/6**  
**Matrix: Water**  
**Analysis Batch: 421884**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 11:12	1

**Lab Sample ID: LCS 400-421884/41**  
**Matrix: Water**  
**Analysis Batch: 421884**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.5		mg/L		105	90 - 110

**Lab Sample ID: MRL 400-421884/3**  
**Matrix: Water**  
**Analysis Batch: 421884**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.48	J	mg/L		74	50 - 150

**Lab Sample ID: 400-162459-1 MS**  
**Matrix: Water**  
**Analysis Batch: 421884**

**Client Sample ID: AY27134 MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.8		10.0	18.2		mg/L		105	73 - 120

**Lab Sample ID: 400-162459-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 421884**

**Client Sample ID: AY27134 MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	7.8		10.0	18.3		mg/L		105	73 - 120	0	8

**Lab Sample ID: 400-162459-11 MS**  
**Matrix: Water**  
**Analysis Batch: 421884**

**Client Sample ID: AY27144 MW-2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.0		10.0	14.5		mg/L		115	73 - 120

**Lab Sample ID: 400-162459-11 MSD**  
**Matrix: Water**  
**Analysis Batch: 421884**

**Client Sample ID: AY27144 MW-2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.0		10.0	14.3		mg/L		113	73 - 120	2	8

**Lab Sample ID: MB 400-421942/6**  
**Matrix: Water**  
**Analysis Batch: 421942**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/04/18 14:12	1

TestAmerica Pensacola

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

**Lab Sample ID: LCS 400-421942/7**  
**Matrix: Water**  
**Analysis Batch: 421942**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	32.9		mg/L		110	90 - 110

**Lab Sample ID: MRL 400-421942/3**  
**Matrix: Water**  
**Analysis Batch: 421942**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.60	J	mg/L		80	50 - 150

**Lab Sample ID: 400-162459-15 MS**  
**Matrix: Water**  
**Analysis Batch: 421942**

**Client Sample ID: AY27311 MW-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	59		10.0	66.9	4	mg/L		74	73 - 120

**Lab Sample ID: 400-162459-15 MSD**  
**Matrix: Water**  
**Analysis Batch: 421942**

**Client Sample ID: AY27311 MW-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	59		10.0	66.8	4	mg/L		74	73 - 120	0	8

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 400-421601/3**  
**Matrix: Water**  
**Analysis Batch: 421601**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			12/01/18 09:13	1

**Lab Sample ID: LCS 400-421601/4**  
**Matrix: Water**  
**Analysis Batch: 421601**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.75		mg/L		94	90 - 110

**Lab Sample ID: 400-162459-1 MS**  
**Matrix: Water**  
**Analysis Batch: 421601**

**Client Sample ID: AY27134 MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.26		1.00	1.12		mg/L		86	75 - 125

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: 400-162459-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 421601**

**Client Sample ID: AY27134 MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.26		1.00	1.14		mg/L		88	75 - 125	2	4

**Lab Sample ID: 400-162459-9 DU**  
**Matrix: Water**  
**Analysis Batch: 421601**

**Client Sample ID: AY27142 MW-18**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.30		0.110	F3	mg/L		93	4

**Lab Sample ID: MB 400-421610/3**  
**Matrix: Water**  
**Analysis Batch: 421610**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			12/01/18 11:51	1

**Lab Sample ID: LCS 400-421610/4**  
**Matrix: Water**  
**Analysis Batch: 421610**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.75		mg/L		94	90 - 110

**Lab Sample ID: 400-162459-18 MS**  
**Matrix: Water**  
**Analysis Batch: 421610**

**Client Sample ID: AY27314 MW-19**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.28		1.00	1.12		mg/L		84	75 - 125

**Lab Sample ID: 400-162459-18 MSD**  
**Matrix: Water**  
**Analysis Batch: 421610**

**Client Sample ID: AY27314 MW-19**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.28		1.00	1.14		mg/L		86	75 - 125	2	4

**Lab Sample ID: 400-162638-D-3 DU**  
**Matrix: Water**  
**Analysis Batch: 421610**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.032		<0.032		mg/L		NC	4



# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-421795/6**  
**Matrix: Water**  
**Analysis Batch: 421795**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			12/03/18 09:16	1

**Lab Sample ID: LCS 400-421795/7**  
**Matrix: Water**  
**Analysis Batch: 421795**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	15.3		mg/L		102	90 - 110

**Lab Sample ID: MRL 400-421795/3**  
**Matrix: Water**  
**Analysis Batch: 421795**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.12	J	mg/L		82	50 - 150

**Lab Sample ID: 400-162459-1 MS**  
**Matrix: Water**  
**Analysis Batch: 421795**

**Client Sample ID: AY27134 MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	720		9.90	696	4	mg/L		-277	77 - 128

**Lab Sample ID: 400-162459-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 421795**

**Client Sample ID: AY27134 MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfate	720		9.90	688	4	mg/L		-355	77 - 128	1	5

**Lab Sample ID: MB 400-422107/6**  
**Matrix: Water**  
**Analysis Batch: 422107**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			12/05/18 15:08	1

**Lab Sample ID: LCS 400-422107/7**  
**Matrix: Water**  
**Analysis Batch: 422107**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	15.4		mg/L		103	90 - 110

**Lab Sample ID: MRL 400-422107/3**  
**Matrix: Water**  
**Analysis Batch: 422107**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.10	J	mg/L		82	50 - 150

TestAmerica Pensacola

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

**Lab Sample ID: 400-162459-3 MS**  
**Matrix: Water**  
**Analysis Batch: 422107**

**Client Sample ID: AY27136 EB-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	10.2		mg/L		102	77 - 128

**Lab Sample ID: 400-162459-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 422107**

**Client Sample ID: AY27136 EB-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.0		mg/L		100	77 - 128	2	5

**Lab Sample ID: 400-162459-14 MS**  
**Matrix: Water**  
**Analysis Batch: 422107**

**Client Sample ID: AY27147 MW-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2400		10.0	2440	4	mg/L		-89	77 - 128

**Lab Sample ID: 400-162459-14 MSD**  
**Matrix: Water**  
**Analysis Batch: 422107**

**Client Sample ID: AY27147 MW-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	2400		10.0	2530	4	mg/L		818	77 - 128	4	5

**Lab Sample ID: MB 400-422145/6**  
**Matrix: Water**  
**Analysis Batch: 422145**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			12/06/18 09:19	1

**Lab Sample ID: LCS 400-422145/7**  
**Matrix: Water**  
**Analysis Batch: 422145**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.5		mg/L		97	90 - 110

**Lab Sample ID: MRL 400-422145/3**  
**Matrix: Water**  
**Analysis Batch: 422145**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.11	J	mg/L		82	50 - 150

**Lab Sample ID: 400-162738-D-1 MS**  
**Matrix: Water**  
**Analysis Batch: 422145**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	10.8		mg/L		108	77 - 128

TestAmerica Pensacola

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: 400-162738-D-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 422145**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.5		mg/L		105	77 - 128	3	5

**Lab Sample ID: 400-162774-F-1 MS**  
**Matrix: Water**  
**Analysis Batch: 422145**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	10		10.0	19.8		mg/L		98	77 - 128		

**Lab Sample ID: 400-162774-F-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 422145**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	10		10.0	18.8		mg/L		88	77 - 128	5	5

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Chain of Custody Record

TestAmerica

<b>Client Information</b> Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Calera State, Zip: AL, 35040 Phone: 205-664-6197 (Tel) Email: lbmick@al.southernco.com Project Name: CCR Site: Coalgas Landfill 1182		<b>Sample Information</b> Lab PM: Whitmore, Chelyenne R E-Mail: chelyenne.whitmore@testamericainc.com Nick: Pitts Phone:		<b>Carrier/Tracking Note:</b> CCC No: 400-56525-24537.1 Page: 1 of 5 Job #:	
<b>Due Date Requested:</b> TAT Requested (days): PO #: WO #: Project #: 40007143 SSOW#:		<b>Analysis Requested</b> Field Filtered Sample (Yes or No): Perform Method (Yes or No): SM 4500 F.C. N N N D SM 4500 C.E. N N N D SM 4500 S.O4.E. N N N D 9315_Ra226, 9320_Ra226, Ra228, Ra229, Ra229.G.F.P.C.			
<b>Sample Identification</b> AY27134 AY27135 AY27135		<b>Sample Date</b> 11/19/18 11/19/18 11/19/18		<b>Sample Time</b> 12:10 13:53 14:40	
<b>Sample Type</b> (C=comp, G=grab) G G G		<b>Matrix</b> (Inorganic, Solid, Organic, Aqueous, etc.) Water Water Water		<b>Preservation Code:</b> MW-10 MW-12 EB-1 (Equipment Blank)	
<b>Special Instructions/Note:</b>		<b>Special Instructions/Note:</b>			
<b>Preservation Codes:</b> A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - BDA M - Hexamine N - None O - NaNO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - DI #3 X - Other (specify)		<b>Total Number of Containers</b> 2 2 2			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/> Deliverable Requested: I, II, III, IV, Other (specify)					
<b>Empty Kill Relinquished by:</b> Relinquished by: Laura Mackitt Relinquished by: Relinquished by: Customer Serial:					
<b>Chain of Custody</b> Date/Time: 11/20/2018 12:45 Date/Time: Date/Time: Date/Time: 11-21-18 Received by: [Signature] Received by: [Signature] Received by: [Signature] Company: APC Company: Company: Company: TA-PEN 16.60 (16.60) 1015 1R-7					



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 Pensacola, FL 32514  
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**Chain of Custody Record**

**TestAmerica**  
 10000 W. McArthur Blvd., Suite 100  
 Jacksonville, FL 32226

<b>Client Information</b>		Lab Pk: Whittire, Cheyenne R		Carrier Tracking Note(s)	
Company: Alabama Power General Test Laboratory		E-Mail: cheyenne.whittire@testamericainc.com		GOC No: 400-56525-24537.1	
Address: 744 County Rd 87 GSC #8		Phone: Ben Rottschadl		Page: 2 of 5	
City: Calera		Phone: Laura Midkiff		Job #:	
State, Zip: AL, 35040		Due Date Requested:		Preservation Codes:	
Phone: 205-664-9197(Tel)		TAT Requested (days):		A - HCL B - NaOH C - Acetic Acid D - Milk Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Humate N - None O - H2O2 P - H2O2S Q - Na2SO4 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Email: lbmidkiff@scouthermco.com		PO #:		Special Instructions/Note:	
Project Name: CCRC		WO #:		Total Number of Containers	
Site: Gaines Landfill 1182		Project #: 40007143		2 MW-13	
		SSOWP:		4 MW-14	
				2 MW-15	
				2 MW-16	
				2 MW-17R	
				2 MW-18	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (specify source, container, preservative, etc.)	Field Filtered Sample (Yes or No)		Performance (Yes or No)		Analysis Requested	Total Number of Containers	Special Instructions/Note
					Field Filtered	Sample	Field Filtered	Sample			
AY27137	11/19/18	09:12	G	Water							
AY27138	11/19/18	10:15	G	Water							
AY27139	11/19/18	11:19	G	Water							
AY27140	11/19/18	12:19	G	Water							
AY27141	11/19/18	13:25	G	Water							
AY27142	11/19/18	15:15	G	Water							

<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by: Laura Midkiff Relinquished by: _____ Relinquished by: _____ Customer Seal Intact: _____ Chain of Custody Seal No.: _____		Method of Shipment: _____ Date/Time: 11/20/2018 12:25 Date/Time: _____ Date/Time: _____ Date/Time: 11-21-18 09:57 Date/Time: 10 15	



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**Chain of Custody Record**

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 THE LEADER IN ENVIRONMENTAL TESTING SERVICES

**Client Information**  
 Client Contact: Laura Midkiff  
 Company: Alabama Power General Test Laboratory  
 Address: 744 County Rd 87 GSC #6  
 City: Calera  
 State, Zip: AL, 35040  
 Phone: 205-664-8197(Tel)  
 Email: lmidkiff@southernco.com  
 Job #:  
 Project #:  
 CCR  
 Site: Gorgias Landfill 1182

**Client Information**  
 Sampler: Anthony Goyjins  
 Lab PW: Whittire, Chyenne R  
 E-Mail: chyenne.whittire@testamericainc.com  
 Carrier Tracking Note:  
 Job #:  
 Page 3 of 5  
 COC No. 400-56525-24537.1

**Analysis Requested**  
 Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSO#W#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (number, material, container, matrix, etc)	Preservation Code:		Field Filtered Sample (Yes or No)	Total Number of Containers				Special Instructions/Note:
					N	D		SM 4500 F_C	SM 4500 C_E	SM 4500 S04_E	9315 Ra226, 9320 Ra228, Ra226Ra228, GPPC	
AY27143	11/19/18	10:31	G	Water			X	X	X	X	4	MW-1
AY27144	11/19/18	11:37	G	Water			X	X	X	X	2	MW-2
AY27145	11/19/18	11:37	G	Water			X	X	X	X	2	MW-2 DUP (Sample Duplicate)
AY27146	11/19/18	13:24	G	Water			X	X	X	X	2	MW-3
AY27147	11/19/18	15:05	G	Water			X	X	X	X	2	MW-4

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Empty Kit Relinquished by:  
 Relinquished by: Laura Midkiff  
 Date/Time: 11/20/2018 12:45  
 Company: APC  
 Relinquished by:  
 Date/Time:  
 Company:  
 Relinquished by:  
 Date/Time:  
 Company:  
 Custody Seal Intact:  Yes  No  
 Custody Seal No. 11-2118-0491 1015  
 Received by: *[Signature]*  
 Date/Time: 11-21-18 04:31  
 Company: *[Signature]*

Method of Shipment:  
 Date/Time:  
 Company:  
 Received by:  
 Date/Time:  
 Company:  
 Received by:  
 Date/Time:  
 Company:  
 Received by:  
 Date/Time:  
 Company:



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### Chain of Custody Record

TestAmerica  
 400-56525-24637.1

**Client Information**  
 Client Contact: Laura Mickitt  
 Company: Alabama Power General Test Laboratory  
 Address: 744 County Rd B7 GSC #8  
 City: Callera  
 State, Zip: AL 35040  
 Phone: 205-664-6197(Tel)  
 Email: lmmickitt@southernco.com  
 Project Name: Gorgas Landfill 1182  
 CCR  
 Site

**Sampler:** Nick Pitts  
 Lab PW: Whitmire, Cheyenne R  
 E-Mail: cheyenne.whitmire@testamericainc.com

**Carrier Tracking Note:**  
 Page 4 of 5  
 Job #:

**Due Date Requested:**  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #: 40007143  
 SSOVW

**Analysis Requested**  
 Routine  
 Preservation Codes:  
 M - Heptane  
 A - HCl  
 B - HNO<sub>3</sub>  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO<sub>4</sub>  
 F - MeOH  
 G - Anchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, etc.)	Preservation Code	Field Filtered Sample (Yes or No)		Parent Number (Yes or No)		Total Number of Containers	Special Instructions/Note:
						Yes	No	Yes	No		
AY27311	11/20/18	09:05	G	Water						2	MW-11
AY27312	11/20/18	09:37	G	Water						2	FB-1 (Field Blank)
AY27313	11/20/18	10:30	G	Water						2	MW-20
AY27314	11/20/18	11:54	G	Water						2	MW-18

Non-Hazard  Flammable  Skin Irritant  
 Deliverable Request:  I, II, III, IV, Other (specify)  
 Poison B  Unknown  Radiological

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: Laura Mickitt Date/Time: 11/20/2018 15:20 Company: APC  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Custody Seal Initialed by: \_\_\_\_\_ Date/Time: 11-21-18 10:15 Company: VA-PEN



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**Chain of Custody Record**

**TestAmerica**  
 400-56525-24557.1  
 Page 5 of 5  
 Job #:

<b>Client Information</b>		<b>Lab PAK</b>		<b>Carrier Tracking Note</b>	
Client Contact: <b>Bern Roltschadi</b> Phone: _____ Company: <b>Whitmore, Chyemenne R</b> chyemenne.whitmore@testamericainc.com		CDC No.: <b>400-56525-24557.1</b> Page: <b>5 of 5</b> Job #: _____			
Address: <b>Alabama Power General Test Laboratory</b> 744 County Rd 87 GSC #8 City: <b>Callera</b> State, Zip: <b>AL, 35040</b> Phone: <b>205-664-6197(Tel)</b> Email: <b>lbmidkif@southernco.com</b> Project Name: <b>CCR</b> CCR: <b>40007143</b> Site: <b>Cor Gas Landfill 1182</b>		<b>Analysis Requested</b> Due Date Requested: _____ TAT Requested (days): _____ PO #: _____ WO #: _____ Project #: _____ CCR: <b>40007143</b> Site: <b>SSDWW</b>		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - High-SO4 F - MeOH G - Acetic Acid H - Acetic Acid I - Acetic Acid J - DI Water K - EDTA L - EDA Other: _____ M - Hexane N - None O - AgNO3 P - Na2SO4 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - Phosphate U - Nitric Acid V - HCl W - pH 4.5 X - other (specify)	
<b>Sample Identification</b> Sample Date: 11/20/18 Sample Time: 08:28 Sample Type: G Matrix: Water Preservation Code: _____		Total Number of Containers: <b>2</b> Special Instructions/Note: _____			
Sample Date: 11/20/18 Sample Time: 08:43 Sample Type: G Matrix: Water Preservation Code: _____		Total Number of Containers: <b>2</b> Special Instructions/Note: _____			
Sample Date: 11/20/18 Sample Time: 08:43 Sample Type: G Matrix: Water Preservation Code: _____		Total Number of Containers: <b>2</b> Special Instructions/Note: _____			
Sample Date: 11/20/18 Sample Time: 10:52 Sample Type: G Matrix: Water Preservation Code: _____		Total Number of Containers: <b>2</b> Special Instructions/Note: _____			
Sample Date: 11/20/18 Sample Time: 12:09 Sample Type: G Matrix: Water Preservation Code: _____		Total Number of Containers: <b>2</b> Special Instructions/Note: _____			
Sample Date: 11/20/18 Sample Time: 12:50 Sample Type: G Matrix: Water Preservation Code: _____		Total Number of Containers: <b>2</b> Special Instructions/Note: _____			
<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
<b>Special Instructions/QC Requirements:</b> _____					
<b>Empty Kit Relinquished by:</b> Relinquished by: <b>Laura Midkiff</b> Date/Time: 11/20/18 15:20		<b>Received by:</b> Relinquished by: _____ Date/Time: _____		<b>Method of Shipment:</b> Date/Time: _____	
<b>Relinquished by:</b> Relinquished by: _____ Date/Time: _____		<b>Received by:</b> Relinquished by: _____ Date/Time: _____		<b>Company:</b> Company: _____	
<b>Relinquished by:</b> Relinquished by: _____ Date/Time: _____		<b>Received by:</b> Relinquished by: <i>[Signature]</i> Date/Time: 11-21-18 10:15		<b>Company:</b> Company: <b>TA-PEN</b>	





## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-162459-1  
SDG Number: Gorgas Landfill 1182

**Login Number: 162459**

**List Number: 1**

**Creator: Conrady, Hank W**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	17.1°C, 16.6°C, IR-7 Anions were received on ice.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-1  
 SDG: Gorgas Landfill 1182

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-162459-2

TestAmerica Sample Delivery Group: Gorgas Landfill 1182

Client Project/Site: CCR Plant Gorgas

For:

Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Laura Midkiff



Authorized for release by:

12/28/2018 5:37:52 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
SDG: Gorgas Landfill 1182

**Job ID: 400-162459-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-162459-2

#### RAD

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-403465: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: AY27134 MW-10 (400-162459-1), AY27135 MW-12 (400-162459-2), AY27136 EB-1 (400-162459-3), AY27137 MW-13 (400-162459-4), AY27138 MW-14 (400-162459-5), AY27139 MW-15 (400-162459-6), AY27140 MW-16 (400-162459-7), AY27141 MW-17R (400-162459-8), AY27142 MW-18 (400-162459-9), AY27143 MW-1 (400-162459-10), AY27144 MW-2 (400-162459-11), AY27145 MW-2 DUP (400-162459-12), AY27146 MW-3 (400-162459-13), AY27147 MW-4 (400-162459-14), AY27311 MW-11 (400-162459-15), AY27312 FB-1 (400-162459-16), AY27313 MW-20 (400-162459-17), AY27314 MW-19 (400-162459-18), AY27315 MW-5 (400-162459-19) and AY27316 MW-6 (400-162459-20). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-403921: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: AY27317 MW-6 DUP (400-162459-21), AY27318 MW-7 (400-162459-22), AY27319 MW-8 (400-162459-23) and AY27320 FB-2 (400-162459-24). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-403463: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: AY27134 MW-10 (400-162459-1), AY27135 MW-12 (400-162459-2), AY27136 EB-1 (400-162459-3), AY27137 MW-13 (400-162459-4), AY27138 MW-14 (400-162459-5), AY27139 MW-15 (400-162459-6), AY27140 MW-16 (400-162459-7), AY27141 MW-17R (400-162459-8), AY27142 MW-18 (400-162459-9), AY27143 MW-1 (400-162459-10), AY27144 MW-2 (400-162459-11), AY27145 MW-2 DUP (400-162459-12), AY27146 MW-3 (400-162459-13), AY27147 MW-4 (400-162459-14), AY27311 MW-11 (400-162459-15), AY27312 FB-1 (400-162459-16), AY27313 MW-20 (400-162459-17), AY27314 MW-19 (400-162459-18), AY27315 MW-5 (400-162459-19) and AY27316 MW-6 (400-162459-20). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-403913: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: AY27317 MW-6 DUP (400-162459-21), AY27318 MW-7 (400-162459-22), AY27319 MW-8 (400-162459-23) and AY27320 FB-2 (400-162459-24). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

#### Comments

Sample duplicate volume was received for samples AY27138 MW-14 (400-162459-5) and AY27143 MW-1 (400-162459-10), but was inadvertently not logged in due to a laboratory login error.

# Method Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
SDG: Gorgas Landfill 1182

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

#### Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

#### Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
SDG: Gorgas Landfill 1182

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162459-1	AY27134 MW-10	Water	11/19/18 12:10	11/21/18 10:15
400-162459-2	AY27135 MW-12	Water	11/19/18 13:53	11/21/18 10:15
400-162459-3	AY27136 EB-1	Water	11/19/18 14:40	11/21/18 10:15
400-162459-4	AY27137 MW-13	Water	11/19/18 09:12	11/21/18 10:15
400-162459-5	AY27138 MW-14	Water	11/19/18 10:15	11/21/18 10:15
400-162459-6	AY27139 MW-15	Water	11/19/18 11:19	11/21/18 10:15
400-162459-7	AY27140 MW-16	Water	11/19/18 12:19	11/21/18 10:15
400-162459-8	AY27141 MW-17R	Water	11/19/18 13:25	11/21/18 10:15
400-162459-9	AY27142 MW-18	Water	11/19/18 15:15	11/21/18 10:15
400-162459-10	AY27143 MW-1	Water	11/19/18 10:31	11/21/18 10:15
400-162459-11	AY27144 MW-2	Water	11/19/18 11:37	11/21/18 10:15
400-162459-12	AY27145 MW-2 DUP	Water	11/19/18 11:37	11/21/18 10:15
400-162459-13	AY27146 MW-3	Water	11/19/18 13:24	11/21/18 10:15
400-162459-14	AY27147 MW-4	Water	11/19/18 15:05	11/21/18 10:15
400-162459-15	AY27311 MW-11	Water	11/20/18 09:05	11/21/18 10:15
400-162459-16	AY27312 FB-1	Water	11/20/18 09:37	11/21/18 10:15
400-162459-17	AY27313 MW-20	Water	11/20/18 10:30	11/21/18 10:15
400-162459-18	AY27314 MW-19	Water	11/20/18 11:54	11/21/18 10:15
400-162459-19	AY27315 MW-5	Water	11/20/18 08:28	11/21/18 10:15
400-162459-20	AY27316 MW-6	Water	11/20/18 09:43	11/21/18 10:15
400-162459-21	AY27317 MW-6 DUP	Water	11/20/18 09:43	11/21/18 10:15
400-162459-22	AY27318 MW-7	Water	11/20/18 10:52	11/21/18 10:15
400-162459-23	AY27319 MW-8	Water	11/20/18 12:09	11/21/18 10:15
400-162459-24	AY27320 FB-2	Water	11/20/18 12:50	11/21/18 10:15

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27134 MW-10**

**Lab Sample ID: 400-162459-1**

**Date Collected: 11/19/18 12:10**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0809	U	0.0609	0.0613	1.00	0.0814	pCi/L	11/29/18 18:14	12/21/18 08:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					11/29/18 18:14	12/21/18 08:02	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0861	U	0.243	0.243	1.00	0.423	pCi/L	11/29/18 18:39	12/12/18 15:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					11/29/18 18:39	12/12/18 15:55	1
Y Carrier	77.4		40 - 110					11/29/18 18:39	12/12/18 15:55	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.167	U	0.251	0.251	5.00	0.423	pCi/L		12/27/18 15:10	1



# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27135 MW-12**

**Lab Sample ID: 400-162459-2**

**Date Collected: 11/19/18 13:53**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.116		0.0747	0.0754	1.00	0.0952	pCi/L	11/29/18 18:14	12/21/18 08:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.0		40 - 110					11/29/18 18:14	12/21/18 08:02	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.532		0.298	0.302	1.00	0.444	pCi/L	11/29/18 18:39	12/12/18 15:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.0		40 - 110					11/29/18 18:39	12/12/18 15:55	1
Y Carrier	80.7		40 - 110					11/29/18 18:39	12/12/18 15:55	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.648		0.307	0.311	5.00	0.444	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27136 EB-1**

**Lab Sample ID: 400-162459-3**

**Date Collected: 11/19/18 14:40**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0366	U	0.0543	0.0544	1.00	0.0933	pCi/L	11/29/18 18:14	12/21/18 08:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					11/29/18 18:14	12/21/18 08:02	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.232	U	0.287	0.288	1.00	0.475	pCi/L	11/29/18 18:39	12/12/18 15:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					11/29/18 18:39	12/12/18 15:55	1
Y Carrier	78.1		40 - 110					11/29/18 18:39	12/12/18 15:55	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.268	U	0.292	0.293	5.00	0.475	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27137 MW-13**

**Lab Sample ID: 400-162459-4**

**Date Collected: 11/19/18 09:12**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.126		0.0714	0.0723	1.00	0.0824	pCi/L	11/29/18 18:14	12/21/18 08:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					11/29/18 18:14	12/21/18 08:02	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.512		0.274	0.278	1.00	0.401	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	78.1		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.637		0.283	0.287	5.00	0.401	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27138 MW-14**

**Lab Sample ID: 400-162459-5**

**Date Collected: 11/19/18 10:15**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0995		0.0655	0.0661	1.00	0.0855	pCi/L	11/29/18 18:14	12/21/18 08:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					11/29/18 18:14	12/21/18 08:02	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.536		0.271	0.275	1.00	0.398	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	80.4		40 - 110					11/29/18 18:39	12/12/18 15:56	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.636		0.279	0.283	5.00	0.398	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27139 MW-15**

**Lab Sample ID: 400-162459-6**

**Date Collected: 11/19/18 11:19**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0882	U	0.0679	0.0684	1.00	0.0932	pCi/L	11/29/18 18:14	12/21/18 08:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					11/29/18 18:14	12/21/18 08:02	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.218	U	0.258	0.259	1.00	0.426	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	80.7		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.306	U	0.267	0.268	5.00	0.426	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27140 MW-16**

**Lab Sample ID: 400-162459-7**

**Date Collected: 11/19/18 12:19**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.190		0.0930	0.0945	1.00	0.114	pCi/L	11/29/18 18:14	12/21/18 09:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					11/29/18 18:14	12/21/18 09:29	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.102	U	0.255	0.255	1.00	0.440	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	78.9		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.292	U	0.271	0.272	5.00	0.440	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27141 MW-17R**

**Lab Sample ID: 400-162459-8**

**Date Collected: 11/19/18 13:25**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.207		0.0919	0.0938	1.00	0.103	pCi/L	11/29/18 18:14	12/21/18 09:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					11/29/18 18:14	12/21/18 09:29	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.440	U	0.305	0.308	1.00	0.475	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	77.4		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.647		0.319	0.322	5.00	0.475	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27142 MW-18**

**Lab Sample ID: 400-162459-9**

**Date Collected: 11/19/18 15:15**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0858		0.0612	0.0616	1.00	0.0807	pCi/L	11/29/18 18:14	12/21/18 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					11/29/18 18:14	12/21/18 09:30	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.188	U	0.309	0.310	1.00	0.520	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	77.0		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.274	U	0.315	0.316	5.00	0.520	pCi/L		12/27/18 15:10	1



# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27143 MW-1**

**Lab Sample ID: 400-162459-10**

**Date Collected: 11/19/18 10:31**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0961		0.0686	0.0691	1.00	0.0941	pCi/L	11/29/18 18:14	12/21/18 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					11/29/18 18:14	12/21/18 09:30	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.766		0.307	0.315	1.00	0.431	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	79.3		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.862		0.315	0.322	5.00	0.431	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27144 MW-2**

**Lab Sample ID: 400-162459-11**

**Date Collected: 11/19/18 11:37**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.127		0.0686	0.0696	1.00	0.0747	pCi/L	11/29/18 18:14	12/21/18 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					11/29/18 18:14	12/21/18 09:30	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.527		0.313	0.317	1.00	0.480	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	78.9		40 - 110					11/29/18 18:39	12/12/18 15:56	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.654		0.320	0.325	5.00	0.480	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27145 MW-2 DUP**

**Lab Sample ID: 400-162459-12**

**Date Collected: 11/19/18 11:37**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.120		0.0778	0.0786	1.00	0.0982	pCi/L	11/29/18 18:14	12/21/18 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.7		40 - 110					11/29/18 18:14	12/21/18 09:30	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.310	U	0.329	0.330	1.00	0.538	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.7		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	79.3		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.430	U	0.338	0.339	5.00	0.538	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27146 MW-3**

**Lab Sample ID: 400-162459-13**

**Date Collected: 11/19/18 13:24**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.214		0.0869	0.0890	1.00	0.0875	pCi/L	11/29/18 18:14	12/21/18 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					11/29/18 18:14	12/21/18 09:30	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307	U	0.292	0.293	1.00	0.471	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	72.5		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.521		0.305	0.306	5.00	0.471	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27147 MW-4**

**Lab Sample ID: 400-162459-14**

**Date Collected: 11/19/18 15:05**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.146		0.0833	0.0843	1.00	0.107	pCi/L	11/29/18 18:14	12/21/18 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					11/29/18 18:14	12/21/18 09:30	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.648		0.313	0.319	1.00	0.459	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	78.5		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.794		0.324	0.330	5.00	0.459	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27311 MW-11**

**Lab Sample ID: 400-162459-15**

**Date Collected: 11/20/18 09:05**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.343		0.108	0.112	1.00	0.0940	pCi/L	11/29/18 18:14	12/21/18 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					11/29/18 18:14	12/21/18 09:30	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.701		0.281	0.289	1.00	0.390	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	82.2		40 - 110					11/29/18 18:39	12/12/18 15:56	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.04		0.301	0.310	5.00	0.390	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27312 FB-1**

**Lab Sample ID: 400-162459-16**

**Date Collected: 11/20/18 09:37**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0518	U	0.0572	0.0573	1.00	0.0909	pCi/L	11/29/18 18:14	12/21/18 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					11/29/18 18:14	12/21/18 09:30	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.386	U	0.277	0.279	1.00	0.431	pCi/L	11/29/18 18:39	12/12/18 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					11/29/18 18:39	12/12/18 15:56	1
Y Carrier	78.5		40 - 110					11/29/18 18:39	12/12/18 15:56	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Combined Radium 226 + 228</b>	<b>0.438</b>		0.283	0.285	5.00	0.431	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27313 MW-20**

**Lab Sample ID: 400-162459-17**

**Date Collected: 11/20/18 10:30**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.286		0.0979	0.101	1.00	0.0903	pCi/L	11/29/18 18:14	12/21/18 09:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					11/29/18 18:14	12/21/18 09:31	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.364	U	0.279	0.281	1.00	0.440	pCi/L	11/29/18 18:39	12/12/18 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					11/29/18 18:39	12/12/18 15:57	1
Y Carrier	74.8		40 - 110					11/29/18 18:39	12/12/18 15:57	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.650		0.296	0.299	5.00	0.440	pCi/L		12/27/18 15:10	1



# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27314 MW-19**

**Lab Sample ID: 400-162459-18**

**Date Collected: 11/20/18 11:54**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.155		0.0801	0.0813	1.00	0.0921	pCi/L	11/29/18 18:14	12/21/18 09:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					11/29/18 18:14	12/21/18 09:31	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.148	U	0.263	0.264	1.00	0.448	pCi/L	11/29/18 18:39	12/12/18 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					11/29/18 18:39	12/12/18 15:57	1
Y Carrier	72.5		40 - 110					11/29/18 18:39	12/12/18 15:57	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.302	U	0.275	0.276	5.00	0.448	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27315 MW-5**

**Lab Sample ID: 400-162459-19**

**Date Collected: 11/20/18 08:28**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.203		0.0902	0.0920	1.00	0.0979	pCi/L	11/29/18 18:14	12/21/18 09:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					11/29/18 18:14	12/21/18 09:31	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.484		0.276	0.279	1.00	0.411	pCi/L	11/29/18 18:39	12/12/18 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					11/29/18 18:39	12/12/18 15:57	1
Y Carrier	78.9		40 - 110					11/29/18 18:39	12/12/18 15:57	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.687		0.290	0.294	5.00	0.411	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27316 MW-6**

**Lab Sample ID: 400-162459-20**

**Date Collected: 11/20/18 09:43**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.392		0.114	0.119	1.00	0.0841	pCi/L	11/29/18 18:14	12/21/18 09:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					11/29/18 18:14	12/21/18 09:31	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.753		0.326	0.333	1.00	0.461	pCi/L	11/29/18 18:39	12/12/18 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					11/29/18 18:39	12/12/18 15:57	1
Y Carrier	72.1		40 - 110					11/29/18 18:39	12/12/18 15:57	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.15		0.345	0.354	5.00	0.461	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27317 MW-6 DUP**

**Lab Sample ID: 400-162459-21**

**Date Collected: 11/20/18 09:43**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.332		0.105	0.109	1.00	0.0938	pCi/L	12/03/18 13:04	12/26/18 09:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					12/03/18 13:04	12/26/18 09:38	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.555		0.319	0.323	1.00	0.483	pCi/L	12/03/18 13:44	12/10/18 16:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					12/03/18 13:44	12/10/18 16:08	1
Y Carrier	81.1		40 - 110					12/03/18 13:44	12/10/18 16:08	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.886		0.336	0.341	5.00	0.483	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27318 MW-7**

**Lab Sample ID: 400-162459-22**

**Date Collected: 11/20/18 10:52**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0588	U	0.0578	0.0580	1.00	0.0895	pCi/L	12/03/18 13:04	12/26/18 09:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					12/03/18 13:04	12/26/18 09:38	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.435		0.266	0.269	1.00	0.403	pCi/L	12/03/18 13:44	12/10/18 16:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					12/03/18 13:44	12/10/18 16:06	1
Y Carrier	83.0		40 - 110					12/03/18 13:44	12/10/18 16:06	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.494		0.272	0.275	5.00	0.403	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27319 MW-8**

**Lab Sample ID: 400-162459-23**

**Date Collected: 11/20/18 12:09**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0872	U	0.0663	0.0667	1.00	0.0939	pCi/L	12/03/18 13:04	12/26/18 09:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.1		40 - 110					12/03/18 13:04	12/26/18 09:38	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.193	U	0.268	0.269	1.00	0.448	pCi/L	12/03/18 13:44	12/10/18 16:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.1		40 - 110					12/03/18 13:44	12/10/18 16:07	1
Y Carrier	84.1		40 - 110					12/03/18 13:44	12/10/18 16:07	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.280	U	0.276	0.277	5.00	0.448	pCi/L		12/27/18 15:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27320 FB-2**

**Lab Sample ID: 400-162459-24**

**Date Collected: 11/20/18 12:50**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00223	U	0.0441	0.0441	1.00	0.0961	pCi/L	12/03/18 13:04	12/26/18 09:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					12/03/18 13:04	12/26/18 09:38	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.171	U	0.271	0.271	1.00	0.457	pCi/L	12/03/18 13:44	12/10/18 16:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					12/03/18 13:44	12/10/18 16:07	1
Y Carrier	80.4		40 - 110					12/03/18 13:44	12/10/18 16:07	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.169	U	0.275	0.275	5.00	0.457	pCi/L		12/27/18 15:10	1

# Definitions/Glossary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
SDG: Gorgas Landfill 1182

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



# Lab Chronicle

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27134 MW-10**

**Lab Sample ID: 400-162459-1**

**Date Collected: 11/19/18 12:10**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406937	12/21/18 08:02	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27135 MW-12**

**Lab Sample ID: 400-162459-2**

**Date Collected: 11/19/18 13:53**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406937	12/21/18 08:02	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27136 EB-1**

**Lab Sample ID: 400-162459-3**

**Date Collected: 11/19/18 14:40**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406937	12/21/18 08:02	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27137 MW-13**

**Lab Sample ID: 400-162459-4**

**Date Collected: 11/19/18 09:12**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406937	12/21/18 08:02	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27138 MW-14**

**Lab Sample ID: 400-162459-5**

**Date Collected: 11/19/18 10:15**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406937	12/21/18 08:02	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27139 MW-15**

**Lab Sample ID: 400-162459-6**

**Date Collected: 11/19/18 11:19**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406937	12/21/18 08:02	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27140 MW-16**

**Lab Sample ID: 400-162459-7**

**Date Collected: 11/19/18 12:19**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:29	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27141 MW-17R**

**Lab Sample ID: 400-162459-8**

**Date Collected: 11/19/18 13:25**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:29	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27142 MW-18**

**Lab Sample ID: 400-162459-9**

**Date Collected: 11/19/18 15:15**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:30	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27143 MW-1**

**Lab Sample ID: 400-162459-10**

**Date Collected: 11/19/18 10:31**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:30	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27144 MW-2**

**Lab Sample ID: 400-162459-11**

**Date Collected: 11/19/18 11:37**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:30	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27145 MW-2 DUP**

**Lab Sample ID: 400-162459-12**

**Date Collected: 11/19/18 11:37**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:30	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
SDG: Gorgas Landfill 1182

**Client Sample ID: AY27146 MW-3**

**Lab Sample ID: 400-162459-13**

**Date Collected: 11/19/18 13:24**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:30	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27147 MW-4**

**Lab Sample ID: 400-162459-14**

**Date Collected: 11/19/18 15:05**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:30	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27311 MW-11**

**Lab Sample ID: 400-162459-15**

**Date Collected: 11/20/18 09:05**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:30	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27312 FB-1**

**Lab Sample ID: 400-162459-16**

**Date Collected: 11/20/18 09:37**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:30	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
SDG: Gorgas Landfill 1182

**Client Sample ID: AY27313 MW-20**

**Lab Sample ID: 400-162459-17**

**Date Collected: 11/20/18 10:30**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:31	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:57	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27314 MW-19**

**Lab Sample ID: 400-162459-18**

**Date Collected: 11/20/18 11:54**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:31	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:57	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27315 MW-5**

**Lab Sample ID: 400-162459-19**

**Date Collected: 11/20/18 08:28**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:31	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:57	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27316 MW-6**

**Lab Sample ID: 400-162459-20**

**Date Collected: 11/20/18 09:43**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403463	11/29/18 18:14	CLP	TAL SL
Total/NA	Analysis	9315		1	406933	12/21/18 09:31	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403465	11/29/18 18:39	CLP	TAL SL
Total/NA	Analysis	9320		1	405210	12/12/18 15:57	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

**Client Sample ID: AY27317 MW-6 DUP**

**Lab Sample ID: 400-162459-21**

**Date Collected: 11/20/18 09:43**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403913	12/03/18 13:04	CLP	TAL SL
Total/NA	Analysis	9315		1	407545	12/26/18 09:38	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403921	12/03/18 13:44	CLP	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 16:08	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27318 MW-7**

**Lab Sample ID: 400-162459-22**

**Date Collected: 11/20/18 10:52**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403913	12/03/18 13:04	CLP	TAL SL
Total/NA	Analysis	9315		1	407545	12/26/18 09:38	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403921	12/03/18 13:44	CLP	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 16:06	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27319 MW-8**

**Lab Sample ID: 400-162459-23**

**Date Collected: 11/20/18 12:09**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403913	12/03/18 13:04	CLP	TAL SL
Total/NA	Analysis	9315		1	407545	12/26/18 09:38	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403921	12/03/18 13:44	CLP	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 16:07	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Client Sample ID: AY27320 FB-2**

**Lab Sample ID: 400-162459-24**

**Date Collected: 11/20/18 12:50**

**Matrix: Water**

**Date Received: 11/21/18 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			403913	12/03/18 13:04	CLP	TAL SL
Total/NA	Analysis	9315		1	407545	12/26/18 09:38	CDR	TAL SL
Total/NA	Prep	PrecSep_0			403921	12/03/18 13:44	CLP	TAL SL
Total/NA	Analysis	9320		1	404801	12/10/18 16:07	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	407737	12/27/18 15:10	RTM	TAL SL

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# QC Association Summary

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

## Rad

### Prep Batch: 403463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-1	AY27134 MW-10	Total/NA	Water	PrecSep-21	
400-162459-2	AY27135 MW-12	Total/NA	Water	PrecSep-21	
400-162459-3	AY27136 EB-1	Total/NA	Water	PrecSep-21	
400-162459-4	AY27137 MW-13	Total/NA	Water	PrecSep-21	
400-162459-5	AY27138 MW-14	Total/NA	Water	PrecSep-21	
400-162459-6	AY27139 MW-15	Total/NA	Water	PrecSep-21	
400-162459-7	AY27140 MW-16	Total/NA	Water	PrecSep-21	
400-162459-8	AY27141 MW-17R	Total/NA	Water	PrecSep-21	
400-162459-9	AY27142 MW-18	Total/NA	Water	PrecSep-21	
400-162459-10	AY27143 MW-1	Total/NA	Water	PrecSep-21	
400-162459-11	AY27144 MW-2	Total/NA	Water	PrecSep-21	
400-162459-12	AY27145 MW-2 DUP	Total/NA	Water	PrecSep-21	
400-162459-13	AY27146 MW-3	Total/NA	Water	PrecSep-21	
400-162459-14	AY27147 MW-4	Total/NA	Water	PrecSep-21	
400-162459-15	AY27311 MW-11	Total/NA	Water	PrecSep-21	
400-162459-16	AY27312 FB-1	Total/NA	Water	PrecSep-21	
400-162459-17	AY27313 MW-20	Total/NA	Water	PrecSep-21	
400-162459-18	AY27314 MW-19	Total/NA	Water	PrecSep-21	
400-162459-19	AY27315 MW-5	Total/NA	Water	PrecSep-21	
400-162459-20	AY27316 MW-6	Total/NA	Water	PrecSep-21	
MB 160-403463/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-403463/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-403463/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 403465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-1	AY27134 MW-10	Total/NA	Water	PrecSep_0	
400-162459-2	AY27135 MW-12	Total/NA	Water	PrecSep_0	
400-162459-3	AY27136 EB-1	Total/NA	Water	PrecSep_0	
400-162459-4	AY27137 MW-13	Total/NA	Water	PrecSep_0	
400-162459-5	AY27138 MW-14	Total/NA	Water	PrecSep_0	
400-162459-6	AY27139 MW-15	Total/NA	Water	PrecSep_0	
400-162459-7	AY27140 MW-16	Total/NA	Water	PrecSep_0	
400-162459-8	AY27141 MW-17R	Total/NA	Water	PrecSep_0	
400-162459-9	AY27142 MW-18	Total/NA	Water	PrecSep_0	
400-162459-10	AY27143 MW-1	Total/NA	Water	PrecSep_0	
400-162459-11	AY27144 MW-2	Total/NA	Water	PrecSep_0	
400-162459-12	AY27145 MW-2 DUP	Total/NA	Water	PrecSep_0	
400-162459-13	AY27146 MW-3	Total/NA	Water	PrecSep_0	
400-162459-14	AY27147 MW-4	Total/NA	Water	PrecSep_0	
400-162459-15	AY27311 MW-11	Total/NA	Water	PrecSep_0	
400-162459-16	AY27312 FB-1	Total/NA	Water	PrecSep_0	
400-162459-17	AY27313 MW-20	Total/NA	Water	PrecSep_0	
400-162459-18	AY27314 MW-19	Total/NA	Water	PrecSep_0	
400-162459-19	AY27315 MW-5	Total/NA	Water	PrecSep_0	
400-162459-20	AY27316 MW-6	Total/NA	Water	PrecSep_0	
MB 160-403465/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-403465/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-403465/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Association Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
SDG: Gorgas Landfill 1182

## Rad (Continued)

### Prep Batch: 403913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-21	AY27317 MW-6 DUP	Total/NA	Water	PrecSep-21	
400-162459-22	AY27318 MW-7	Total/NA	Water	PrecSep-21	
400-162459-23	AY27319 MW-8	Total/NA	Water	PrecSep-21	
400-162459-24	AY27320 FB-2	Total/NA	Water	PrecSep-21	
MB 160-403913/19-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-403913/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-403913/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 403921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162459-21	AY27317 MW-6 DUP	Total/NA	Water	PrecSep_0	
400-162459-22	AY27318 MW-7	Total/NA	Water	PrecSep_0	
400-162459-23	AY27319 MW-8	Total/NA	Water	PrecSep_0	
400-162459-24	AY27320 FB-2	Total/NA	Water	PrecSep_0	
MB 160-403921/19-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-403921/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-403921/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	



# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-403463/23-A**  
**Matrix: Water**  
**Analysis Batch: 406933**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 403463**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05688	U	0.0583	0.0585	1.00	0.0912	pCi/L	11/29/18 18:14	12/21/18 09:31	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					11/29/18 18:14	12/21/18 09:31	1

**Lab Sample ID: LCS 160-403463/1-A**  
**Matrix: Water**  
**Analysis Batch: 406937**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 403463**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	9.941		1.05	1.00	0.0914	pCi/L	88	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	88.5		40 - 110						

**Lab Sample ID: LCSD 160-403463/2-A**  
**Matrix: Water**  
**Analysis Batch: 406937**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 403463**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.4	9.956		1.05	1.00	0.0797	pCi/L	88	68 - 137	0.01	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	91.4		40 - 110								

**Lab Sample ID: MB 160-403913/19-A**  
**Matrix: Water**  
**Analysis Batch: 407546**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 403913**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02783	U	0.0532	0.0533	1.00	0.0957	pCi/L	12/03/18 13:04	12/26/18 09:43	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.1		40 - 110					12/03/18 13:04	12/26/18 09:43	1

**Lab Sample ID: LCS 160-403913/1-A**  
**Matrix: Water**  
**Analysis Batch: 407545**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 403913**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	11.09		1.15	1.00	0.0988	pCi/L	98	68 - 137

TestAmerica Pensacola

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

## Method: 9315 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-403913/1-A**  
**Matrix: Water**  
**Analysis Batch: 407545**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 403913**

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	82.3		40 - 110

**Lab Sample ID: LCSD 160-403913/2-A**  
**Matrix: Water**  
**Analysis Batch: 407545**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 403913**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.4	11.21		1.16	1.00	0.0890	pCi/L	99	68 - 137	0.05	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	80.5		40 - 110

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-403465/23-A**  
**Matrix: Water**  
**Analysis Batch: 405210**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 403465**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.04684	U	0.219	0.219	1.00	0.386	pCi/L	11/29/18 18:39	12/12/18 15:57	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110	11/29/18 18:39	12/12/18 15:57	1
Y Carrier	79.3		40 - 110	11/29/18 18:39	12/12/18 15:57	1

**Lab Sample ID: LCS 160-403465/1-A**  
**Matrix: Water**  
**Analysis Batch: 405210**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 403465**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.13	7.791		0.984	1.00	0.440	pCi/L	85	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	88.5		40 - 110
Y Carrier	77.4		40 - 110

**Lab Sample ID: LCSD 160-403465/2-A**  
**Matrix: Water**  
**Analysis Batch: 405210**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 403465**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.13	7.048		0.910	1.00	0.398	pCi/L	77	56 - 140	0.39	1

TestAmerica Pensacola

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCSD 160-403465/2-A**  
**Matrix: Water**  
**Analysis Batch: 405210**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 403465**

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	91.4		40 - 110
Y Carrier	75.9		40 - 110

**Lab Sample ID: MB 160-403921/19-A**  
**Matrix: Water**  
**Analysis Batch: 404801**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 403921**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.02017	U	0.273	0.273	1.00	0.489	pCi/L	12/03/18 13:44	12/10/18 16:08	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	79.1		40 - 110	12/03/18 13:44	12/10/18 16:08	1
Y Carrier	81.5		40 - 110	12/03/18 13:44	12/10/18 16:08	1

**Lab Sample ID: LCS 160-403921/1-A**  
**Matrix: Water**  
**Analysis Batch: 404801**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 403921**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.14	9.877		1.20	1.00	0.479	pCi/L	108	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	82.3		40 - 110
Y Carrier	80.4		40 - 110

**Lab Sample ID: LCSD 160-403921/2-A**  
**Matrix: Water**  
**Analysis Batch: 404801**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 403921**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.14	9.864		1.20	1.00	0.444	pCi/L	108	56 - 140	0.01	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	80.5		40 - 110
Y Carrier	81.5		40 - 110



**Chain of Custody Record**

**Client Information**  
 Client Name: Laura Mickoff  
 Lab Pk.: Whitmire, Cheyenne R  
 E-Mail: cheyenne.whitmire@testamericainc.com

**Analysis Requested**  
 Due Date Requested:  
 TAT Requested (days):  
 Routine  
 City: Calera  
 State, Zip: AL, 35040  
 Phone: 205-664-9197(Tel)  
 Email: lbmickoff@southemco.com  
 Project Name: CCR  
 Site: Gomes Landfill 1182

**Sample Identification**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (see note on back)	Field Filtered Sample (Yes or No)		Performance (Yes or No)		Preservation Codes		Special Instructions/Note:
					Field Filtered	Performance	N	D	N	D	
AY27137	11/19/18	09:12	G	Water			X	X	X	X	MMW-13
AY27138	11/19/18	10:15	G	Water	X		X	X	X	X	MMW-14
AY27139	11/19/18	11:19	G	Water			X	X	X	X	MMW-15
AY27140	11/19/18	12:19	G	Water			X	X	X	X	MMW-16
AY27141	11/19/18	13:25	G	Water			X	X	X	X	MMW-17R
AY27142	11/19/18	15:15	G	Water			X	X	X	X	MMW-18

**Sample Disposal** (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/OC Requirements:**

**Empty Kit Relinquished by:** Laura Mickoff  
 Date/Time: 11/20/2018 12:25  
 Company: APC

**Relinquished by:**  
 Date/Time:  
 Company:

**Relinquished by:**  
 Date/Time: 11-21-18 08:57  
 Company: TH-EN  
 Date/Time: 10 15

**Preservation Codes:**  
 M - Humane  
 N - None  
 A - HCL  
 B - NaOH  
 C - Acetic Acid  
 D - Milk Acid  
 E - NaHSO4  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:

**Special Instructions/Note:**  
 Total Number of Containers: 2

**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

**Chain of Custody Record**

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING SERVICES

**Client Information**  
 Client Contact: Laura Midkiff  
 Company: Alabama Power General Test Laboratory  
 Address: 744 County Rd 87 GSC #6  
 City: Calera  
 State, Zip: AL, 35040  
 Phone: 205-664-8197(Tel)  
 Email: lauram@alpower.com  
 Job #:

**Client Information**  
 Sampler: Anthony Conjilins  
 Lab PW: Whittome, Cheryenne R  
 Phone: cheryenne.whittome@testamericainc.com  
 E-Mail: cheryenne.whittome@testamericainc.com  
 Job #:

**Analysis Requested**  
 Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 CCR:  
 Site:  
 Georgia Landfill 1182

**Analysis Requested**  
 Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - NaNO3  
 D - NaNO2  
 E - NaHSO4  
 F - MeOH  
 G - Amiblor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Z - other (specify)  
 Other:  
 M - Heptane  
 N - None  
 O - None  
 P - None  
 Q - None  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4.5

Sample Identification	Sample Date	Sample Time (C-comp, G=grab)	Sample Type (C-comp, G=grab)	Matrix (Number Method or Matrix, Specimen, etc)	Preservation Code:				Special Instructions/Note:
					A	B	C	D	
AY27143	11/19/18	10:31	G	Water	X	X	X	X	MW-1
AY27144	11/19/18	11:37	G	Water	X	X	X	X	MW-2
AY27145	11/19/18	11:37	G	Water	X	X	X	X	MW-2 DUP (Sample Duplicate)
AY27146	11/19/18	13:24	G	Water	X	X	X	X	MW-3
AY27147	11/19/18	15:05	G	Water	X	X	X	X	MW-4

**Sample Disposal** (A fee may be assessed if samples are retained longer than 1 month)  
 Return to Client  Discard by Lab  Archive For \_\_\_\_\_ Months  
**Special Instructions/IOC Requirements:**

**Empty Kit Relinquished by:**  
 Relinquished by: Laura Midkiff  
 Date/Time: 11/20/2018 12:45  
 Company: APC  
 Method of Shipment:  
 Relinquished by:  
 Date/Time:  
 Company:  
 Relinquished by:  
 Date/Time:  
 Company:  
 Custody Seal Intact:  Yes  No  
 Custody Seal No.:



TestAmerica Pensacola  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone: (850) 474-1001 Fax: (850) 478-2671

### Chain of Custody Record

TestAmerica  
 400-56525-24637.1

**Client Information**  
 Client Contact: Laura Mickitt  
 Company: Alabama Power General Test Laboratory  
 Address: 744 County Rd B7 GSC #8  
 City: Callera  
 State, Zip: AL 35040  
 Phone: 205-664-6197(Tel)  
 Email: lhmickitt@southernco.com  
 Project Name: Gorgas Landfill 1182  
 CCR  
 Site

Lab PW: Whitmore, Cheyenne R  
 E-Mail: cheyenne.whitmore@testamericainc.com

Carrier Tracking Note:  
 COC No: 400-56525-24637.1  
 Page: Page 4 of 5  
 Job #:

**Analysis Requested**  
 Due Date Requested:  
 TAT Requested (days):  
 Routine  
 PO #:  
 WO #:  
 Project #: 40007143  
 SSOV#

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, etc.)	Preservation Code	Field Filtered Sample (Yes or No)		Parent Number (Yes or No)		Total Number of Containers	Special Instructions/Note:
						Y	N	Y	N		
AY27311	11/20/18	09:05	G	Water						2	MW-11
AY27312	11/20/18	09:37	G	Water						2	FB-1 (Field Blank)
AY27313	11/20/18	10:30	G	Water						2	MW-20
AY27314	11/20/18	11:54	G	Water						2	MW-18

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Empty Kit Relinquished by: Laura Mickitt  
 Relinquished by: Date/Time: 11/20/2018 15:20 Company: APC  
 Relinquished by: Date/Time: Company:  
 Relinquished by: Date/Time: Company:  
 Custody Seal Initialed by: Date/Time: 11-21-18 10:15 Company: VA-PEN

Special Instructions/QC Requirements:  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Discard By Lab  Archive For \_\_\_\_\_ Months



**Chain of Custody Record**

<b>Client Information</b>		<b>Lab PAK</b>		<b>Carrier Tracking Note</b>			
Sampler: <b>Bern Rottirschadi</b> Client Contact: <b>Laura Mickliff</b> Company: <b>Alabama Power General Test Laboratory</b> Address: <b>744 County Rd 87 GSC #8</b> City: <b>Callera</b> State, Zip: <b>AL, 35040</b> Phone: <b>205-664-6197(Tel)</b> Email: <b>lbmickliff@southernco.com</b> Project #: CCR: <b>40007143</b> Site: <b>Correas Landfill 1182</b>		Lab PAK: <b>Whitmore, Chyemenne R</b> E-Mail: <b>chyemenne.whitmore@testamericainc.com</b>		CDC No.: <b>400-56525-24557.1</b> Page: <b>Page 5 of 5</b> Job #:			
<b>Due Date Requested:</b>		<b>Analysis Requested</b>					
TAT Requested (days):		Routine		Total Number of containers: <b>2</b>			
PO #	WO #	Form Filtered Sample (Yes or No)		Special Instructions/Note:			
		Perform filtered (Yes or No)					
Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Sewage, Urine, etc)	SM 4500 F <sub>o</sub>	SM 4500 Cl <sub>e</sub>	SM 4500 SO <sub>4</sub> F	8315 R <sub>az28</sub> , 9320 R <sub>az28</sub> , R <sub>az28</sub> R <sub>az28</sub> , GPPC
11/20/18	08:28	G	Water	X	X	X	
11/20/18	08:43	G	Water	X	X	X	
11/20/18	08:43	G	Water	X	X	X	
11/20/18	10:52	G	Water	X	X	X	
11/20/18	12:09	G	Water	X	X	X	
11/20/18	12:50	G	Water	X	X	X	
Sample Identification		Preservation Code:		MW-5			
AY27316				MW-6			
AY27317				MW-6 DUP (Sample Duplicate)			
AY27318				MW-7			
AY27319				MW-8			
AY27320				FB-2 (Field Blank)			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Dispose By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:		Method of Shipment:			
Relinquished by: Laura Mickliff		Date/Time: 11/20/18 15:20		Company: APC			
Relinquished by:		Date/Time:		Company:			
Relinquished by:		Date/Time:		Company:			
Custody Seal(s) intact: <input checked="" type="checkbox"/> (Specify Seal No. _____)		Received by: <i>[Signature]</i>		Date/Time: 11-21-18 10:15		Company: TA-PEN	





## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-162459-2  
SDG Number: Gorgas Landfill 1182

**Login Number: 162459**

**List Number: 1**

**Creator: Conrady, Hank W**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	17.1°C, 16.6°C, IR-7 Anions were received on ice.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-162459-2  
SDG Number: Gorgas Landfill 1182

**Login Number: 162459**  
**List Number: 2**  
**Creator: Dupart, Lacey S**

**List Source: TestAmerica St. Louis**  
**List Creation: 11/27/18 02:20 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	19.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
 SDG: Gorgas Landfill 1182

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18 *
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

## Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18 *
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	90125	12-31-18 *
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18 *
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-162459-2  
SDG: Gorgas Landfill 1182

## Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19 *
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

Well ID	Reading Time	Value	Unit	Description
APCO-GS-GYPLF-MW-1	2/13/2018 13:02	2229.1	uS/cm	Conductivity
APCO-GS-GYPLF-MW-1	2/13/2018 13:02	92.45	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-1	2/13/2018 13:02	0.76	mg/L	DO
APCO-GS-GYPLF-MW-1	2/13/2018 13:02	153.6	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-1	2/13/2018 13:02	5.18	pH	pH
APCO-GS-GYPLF-MW-1	2/13/2018 13:02	18.66	C	Temperature
APCO-GS-GYPLF-MW-1	2/13/2018 13:02	0.21	NTU	Turbidity
APCO-GS-GYPLF-MW-1	2/13/2018 13:07	2229.5	uS/cm	Conductivity
APCO-GS-GYPLF-MW-1	2/13/2018 13:07	92.55	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-1	2/13/2018 13:07	0.77	mg/L	DO
APCO-GS-GYPLF-MW-1	2/13/2018 13:07	145.6	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-1	2/13/2018 13:07	5.17	pH	pH
APCO-GS-GYPLF-MW-1	2/13/2018 13:07	18.7	C	Temperature
APCO-GS-GYPLF-MW-1	2/13/2018 13:07	0.18	NTU	Turbidity
APCO-GS-GYPLF-MW-1	2/13/2018 13:12	2233.8	uS/cm	Conductivity
APCO-GS-GYPLF-MW-1	2/13/2018 13:12	92.58	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-1	2/13/2018 13:12	0.74	mg/L	DO
APCO-GS-GYPLF-MW-1	2/13/2018 13:12	140.4	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-1	2/13/2018 13:12	5.18	pH	pH
APCO-GS-GYPLF-MW-1	2/13/2018 13:12	18.68	C	Temperature
APCO-GS-GYPLF-MW-1	2/13/2018 13:12	0.22	NTU	Turbidity
APCO-GS-GYPLF-MW-1	2/13/2018 13:17	2235.9	uS/cm	Conductivity
APCO-GS-GYPLF-MW-1	2/13/2018 13:17	92.61	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-1	2/13/2018 13:17	0.7	mg/L	DO
APCO-GS-GYPLF-MW-1	2/13/2018 13:17	137.1	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-1	2/13/2018 13:17	5.18	pH	pH
APCO-GS-GYPLF-MW-1	2/13/2018 13:17	18.74	C	Temperature
APCO-GS-GYPLF-MW-1	2/13/2018 13:17	0.19	NTU	Turbidity

**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

Well ID	Reading Time	Value	Unit	Description
APCO-GS-GYPLF-MW-2	2/13/2018 12:05	2142.7	uS/cm	Conductivity
APCO-GS-GYPLF-MW-2	2/13/2018 12:05	83.37	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-2	2/13/2018 12:05	0.14	mg/L	DO
APCO-GS-GYPLF-MW-2	2/13/2018 12:05	45.1	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-2	2/13/2018 12:05	6.2	pH	pH
APCO-GS-GYPLF-MW-2	2/13/2018 12:05	18.17	C	Temperature
APCO-GS-GYPLF-MW-2	2/13/2018 12:05	5.55	NTU	Turbidity
APCO-GS-GYPLF-MW-2	2/13/2018 12:10	2158.5	uS/cm	Conductivity
APCO-GS-GYPLF-MW-2	2/13/2018 12:10	83.37	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-2	2/13/2018 12:10	0.12	mg/L	DO
APCO-GS-GYPLF-MW-2	2/13/2018 12:10	51.1	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-2	2/13/2018 12:10	6.21	pH	pH
APCO-GS-GYPLF-MW-2	2/13/2018 12:10	18.19	C	Temperature
APCO-GS-GYPLF-MW-2	2/13/2018 12:10	3.18	NTU	Turbidity
APCO-GS-GYPLF-MW-2	2/13/2018 12:15	2159.5	uS/cm	Conductivity
APCO-GS-GYPLF-MW-2	2/13/2018 12:15	83.37	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-2	2/13/2018 12:15	0.12	mg/L	DO
APCO-GS-GYPLF-MW-2	2/13/2018 12:15	51.3	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-2	2/13/2018 12:15	6.2	pH	pH
APCO-GS-GYPLF-MW-2	2/13/2018 12:15	18.17	C	Temperature
APCO-GS-GYPLF-MW-2	2/13/2018 12:15	1.46	NTU	Turbidity
APCO-GS-GYPLF-MW-2	2/13/2018 12:20	2168.8	uS/cm	Conductivity
APCO-GS-GYPLF-MW-2	2/13/2018 12:20	83.37	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-2	2/13/2018 12:20	0.12	mg/L	DO
APCO-GS-GYPLF-MW-2	2/13/2018 12:20	51.5	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-2	2/13/2018 12:20	6.21	pH	pH
APCO-GS-GYPLF-MW-2	2/13/2018 12:20	18.26	C	Temperature
APCO-GS-GYPLF-MW-2	2/13/2018 12:20	1.12	NTU	Turbidity

**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

Well ID	Reading Time	Value	Unit	Description
APCO-GS-GYPLF-MW-3	2/13/2018 10:57	4564.3	uS/cm	Conductivity
APCO-GS-GYPLF-MW-3	2/13/2018 10:57	107.17	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-3	2/13/2018 10:57	6.14	mg/L	DO
APCO-GS-GYPLF-MW-3	2/13/2018 10:57	205.9	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-3	2/13/2018 10:57	5.25	pH	pH
APCO-GS-GYPLF-MW-3	2/13/2018 10:57	17.1	C	Temperature
APCO-GS-GYPLF-MW-3	2/13/2018 10:57	15.9	NTU	Turbidity
APCO-GS-GYPLF-MW-3	2/13/2018 11:02	4600.2	uS/cm	Conductivity
APCO-GS-GYPLF-MW-3	2/13/2018 11:02	107.21	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-3	2/13/2018 11:02	6.17	mg/L	DO
APCO-GS-GYPLF-MW-3	2/13/2018 11:02	159.8	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-3	2/13/2018 11:02	5.59	pH	pH
APCO-GS-GYPLF-MW-3	2/13/2018 11:02	17.1	C	Temperature
APCO-GS-GYPLF-MW-3	2/13/2018 11:02	9.63	NTU	Turbidity
APCO-GS-GYPLF-MW-3	2/13/2018 11:07	4613.5	uS/cm	Conductivity
APCO-GS-GYPLF-MW-3	2/13/2018 11:07	107.22	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-3	2/13/2018 11:07	6.17	mg/L	DO
APCO-GS-GYPLF-MW-3	2/13/2018 11:07	151.1	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-3	2/13/2018 11:07	5.66	pH	pH
APCO-GS-GYPLF-MW-3	2/13/2018 11:07	17.32	C	Temperature
APCO-GS-GYPLF-MW-3	2/13/2018 11:07	5.42	NTU	Turbidity
APCO-GS-GYPLF-MW-3	2/13/2018 11:12	4605.7	uS/cm	Conductivity
APCO-GS-GYPLF-MW-3	2/13/2018 11:12	107.23	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-3	2/13/2018 11:12	6.16	mg/L	DO
APCO-GS-GYPLF-MW-3	2/13/2018 11:12	147.6	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-3	2/13/2018 11:12	5.67	pH	pH
APCO-GS-GYPLF-MW-3	2/13/2018 11:12	17.37	C	Temperature
APCO-GS-GYPLF-MW-3	2/13/2018 11:12	3.57	NTU	Turbidity

**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

Well ID	Reading Time	Value	Unit	Description
APCO-GS-GYPLF-MW-4	2/13/2018 9:30	3787.3	uS/cm	Conductivity
APCO-GS-GYPLF-MW-4	2/13/2018 9:30	115.94	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-4	2/13/2018 9:30	0.9	mg/L	DO
APCO-GS-GYPLF-MW-4	2/13/2018 9:30	103.7	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-4	2/13/2018 9:30	6.16	pH	pH
APCO-GS-GYPLF-MW-4	2/13/2018 9:30	19.32	C	Temperature
APCO-GS-GYPLF-MW-4	2/13/2018 9:30	1.28	NTU	Turbidity
APCO-GS-GYPLF-MW-4	2/13/2018 9:35	3792.2	uS/cm	Conductivity
APCO-GS-GYPLF-MW-4	2/13/2018 9:35	115.94	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-4	2/13/2018 9:35	0.74	mg/L	DO
APCO-GS-GYPLF-MW-4	2/13/2018 9:35	99.9	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-4	2/13/2018 9:35	6.16	pH	pH
APCO-GS-GYPLF-MW-4	2/13/2018 9:35	19.38	C	Temperature
APCO-GS-GYPLF-MW-4	2/13/2018 9:35	0.79	NTU	Turbidity
APCO-GS-GYPLF-MW-4	2/13/2018 9:40	3776.3	uS/cm	Conductivity
APCO-GS-GYPLF-MW-4	2/13/2018 9:40	115.94	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-4	2/13/2018 9:40	0.81	mg/L	DO
APCO-GS-GYPLF-MW-4	2/13/2018 9:40	97.3	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-4	2/13/2018 9:40	6.16	pH	pH
APCO-GS-GYPLF-MW-4	2/13/2018 9:40	19.41	C	Temperature
APCO-GS-GYPLF-MW-4	2/13/2018 9:40	0.82	NTU	Turbidity
APCO-GS-GYPLF-MW-4	2/13/2018 9:45	3718.6	uS/cm	Conductivity
APCO-GS-GYPLF-MW-4	2/13/2018 9:45	115.94	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-4	2/13/2018 9:45	1.42	mg/L	DO
APCO-GS-GYPLF-MW-4	2/13/2018 9:45	101.7	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-4	2/13/2018 9:45	6.17	pH	pH
APCO-GS-GYPLF-MW-4	2/13/2018 9:45	19.44	C	Temperature
APCO-GS-GYPLF-MW-4	2/13/2018 9:45	1.09	NTU	Turbidity
APCO-GS-GYPLF-MW-4	2/13/2018 9:50	3619.4	uS/cm	Conductivity
APCO-GS-GYPLF-MW-4	2/13/2018 9:50	115.94	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-4	2/13/2018 9:50	2.55	mg/L	DO
APCO-GS-GYPLF-MW-4	2/13/2018 9:50	108.9	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-4	2/13/2018 9:50	6.19	pH	pH
APCO-GS-GYPLF-MW-4	2/13/2018 9:50	19.47	C	Temperature
APCO-GS-GYPLF-MW-4	2/13/2018 9:50	2.22	NTU	Turbidity
APCO-GS-GYPLF-MW-4	2/13/2018 9:55	3568.2	uS/cm	Conductivity
APCO-GS-GYPLF-MW-4	2/13/2018 9:55	115.95	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-4	2/13/2018 9:55	3.31	mg/L	DO
APCO-GS-GYPLF-MW-4	2/13/2018 9:55	112.2	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-4	2/13/2018 9:55	6.21	pH	pH
APCO-GS-GYPLF-MW-4	2/13/2018 9:55	19.46	C	Temperature
APCO-GS-GYPLF-MW-4	2/13/2018 9:55	1.73	NTU	Turbidity
APCO-GS-GYPLF-MW-4	2/13/2018 10:00	3552.6	uS/cm	Conductivity
APCO-GS-GYPLF-MW-4	2/13/2018 10:00	115.96	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-4	2/13/2018 10:00	3.59	mg/L	DO



**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-GYPLF-MW-4	2/13/2018 10:00	113.4	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-4	2/13/2018 10:00	6.21	pH	pH
APCO-GS-GYPLF-MW-4	2/13/2018 10:00	19.5	C	Temperature
APCO-GS-GYPLF-MW-4	2/13/2018 10:00	1.15	NTU	Turbidity
APCO-GS-GYPLF-MW-4	2/13/2018 10:05	3541.1	uS/cm	Conductivity
APCO-GS-GYPLF-MW-4	2/13/2018 10:05	115.97	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-4	2/13/2018 10:05	3.73	mg/L	DO
APCO-GS-GYPLF-MW-4	2/13/2018 10:05	113.7	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-4	2/13/2018 10:05	6.22	pH	pH
APCO-GS-GYPLF-MW-4	2/13/2018 10:05	19.55	C	Temperature
APCO-GS-GYPLF-MW-4	2/13/2018 10:05	0.89	NTU	Turbidity
APCO-GS-GYPLF-MW-4	2/13/2018 10:10	3535.5	uS/cm	Conductivity
APCO-GS-GYPLF-MW-4	2/13/2018 10:10	115.97	ft	Depth to Water Detail
APCO-GS-GYPLF-MW-4	2/13/2018 10:10	3.78	mg/L	DO
APCO-GS-GYPLF-MW-4	2/13/2018 10:10	113.5	mv	Oxidation Reduction Potention
APCO-GS-GYPLF-MW-4	2/13/2018 10:10	6.22	pH	pH
APCO-GS-GYPLF-MW-4	2/13/2018 10:10	19.54	C	Temperature
APCO-GS-GYPLF-MW-4	2/13/2018 10:10	0.66	NTU	Turbidity

**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-13	2/13/2018 14:11	3210	uS/cm	Conductivity
APCO-GS-CCB-MW-13	2/13/2018 14:11	93.69	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	2/13/2018 14:11	0.54	mg/L	DO
APCO-GS-CCB-MW-13	2/13/2018 14:11	13.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	2/13/2018 14:11	6.34	pH	pH
APCO-GS-CCB-MW-13	2/13/2018 14:11	19.19	C	Temperature
APCO-GS-CCB-MW-13	2/13/2018 14:11	1.29	NTU	Turbidity
APCO-GS-CCB-MW-13	2/13/2018 14:16	2979.5	uS/cm	Conductivity
APCO-GS-CCB-MW-13	2/13/2018 14:16	93.71	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	2/13/2018 14:16	0.36	mg/L	DO
APCO-GS-CCB-MW-13	2/13/2018 14:16	25.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	2/13/2018 14:16	6.38	pH	pH
APCO-GS-CCB-MW-13	2/13/2018 14:16	19.09	C	Temperature
APCO-GS-CCB-MW-13	2/13/2018 14:16	1.05	NTU	Turbidity
APCO-GS-CCB-MW-13	2/13/2018 14:21	2756.1	uS/cm	Conductivity
APCO-GS-CCB-MW-13	2/13/2018 14:21	93.71	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	2/13/2018 14:21	0.45	mg/L	DO
APCO-GS-CCB-MW-13	2/13/2018 14:21	31.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	2/13/2018 14:21	6.46	pH	pH
APCO-GS-CCB-MW-13	2/13/2018 14:21	19.1	C	Temperature
APCO-GS-CCB-MW-13	2/13/2018 14:21	0.53	NTU	Turbidity
APCO-GS-CCB-MW-13	2/13/2018 14:26	2700	uS/cm	Conductivity
APCO-GS-CCB-MW-13	2/13/2018 14:26	93.73	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	2/13/2018 14:26	0.52	mg/L	DO
APCO-GS-CCB-MW-13	2/13/2018 14:26	32.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	2/13/2018 14:26	6.49	pH	pH
APCO-GS-CCB-MW-13	2/13/2018 14:26	18.98	C	Temperature
APCO-GS-CCB-MW-13	2/13/2018 14:26	0.47	NTU	Turbidity
APCO-GS-CCB-MW-13	2/13/2018 14:31	2662.2	uS/cm	Conductivity
APCO-GS-CCB-MW-13	2/13/2018 14:31	93.73	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	2/13/2018 14:31	0.63	mg/L	DO
APCO-GS-CCB-MW-13	2/13/2018 14:31	31.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	2/13/2018 14:31	6.5	pH	pH
APCO-GS-CCB-MW-13	2/13/2018 14:31	19.06	C	Temperature
APCO-GS-CCB-MW-13	2/13/2018 14:31	0.4	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-14	2/13/2018 15:14	3117.2	uS/cm	Conductivity
APCO-GS-CCB-MW-14	2/13/2018 15:14	89.1	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	2/13/2018 15:14	0.29	mg/L	DO
APCO-GS-CCB-MW-14	2/13/2018 15:14	27	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	2/13/2018 15:14	6.36	pH	pH
APCO-GS-CCB-MW-14	2/13/2018 15:14	18.95	C	Temperature
APCO-GS-CCB-MW-14	2/13/2018 15:14	2.73	NTU	Turbidity
APCO-GS-CCB-MW-14	2/13/2018 15:19	3115.9	uS/cm	Conductivity
APCO-GS-CCB-MW-14	2/13/2018 15:19	89.1	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	2/13/2018 15:19	0.22	mg/L	DO
APCO-GS-CCB-MW-14	2/13/2018 15:19	29.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	2/13/2018 15:19	6.36	pH	pH
APCO-GS-CCB-MW-14	2/13/2018 15:19	18.91	C	Temperature
APCO-GS-CCB-MW-14	2/13/2018 15:19	0.42	NTU	Turbidity
APCO-GS-CCB-MW-14	2/13/2018 15:24	3117.7	uS/cm	Conductivity
APCO-GS-CCB-MW-14	2/13/2018 15:24	89.1	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	2/13/2018 15:24	0.19	mg/L	DO
APCO-GS-CCB-MW-14	2/13/2018 15:24	28.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	2/13/2018 15:24	6.36	pH	pH
APCO-GS-CCB-MW-14	2/13/2018 15:24	18.89	C	Temperature
APCO-GS-CCB-MW-14	2/13/2018 15:24	0.3	NTU	Turbidity
APCO-GS-CCB-MW-14	2/13/2018 15:29	3117.1	uS/cm	Conductivity
APCO-GS-CCB-MW-14	2/13/2018 15:29	89.11	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	2/13/2018 15:29	0.18	mg/L	DO
APCO-GS-CCB-MW-14	2/13/2018 15:29	27.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	2/13/2018 15:29	6.36	pH	pH
APCO-GS-CCB-MW-14	2/13/2018 15:29	18.92	C	Temperature
APCO-GS-CCB-MW-14	2/13/2018 15:29	0.43	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-15	2/14/2018 9:13	2690.2	uS/cm	Conductivity
APCO-GS-CCB-MW-15	2/14/2018 9:13	67.48	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	2/14/2018 9:13	0.33	mg/L	DO
APCO-GS-CCB-MW-15	2/14/2018 9:13	-1.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	2/14/2018 9:13	6.09	pH	pH
APCO-GS-CCB-MW-15	2/14/2018 9:13	18.12	C	Temperature
APCO-GS-CCB-MW-15	2/14/2018 9:13	0.45	NTU	Turbidity
APCO-GS-CCB-MW-15	2/14/2018 9:18	2646.9	uS/cm	Conductivity
APCO-GS-CCB-MW-15	2/14/2018 9:18	67.48	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	2/14/2018 9:18	0.23	mg/L	DO
APCO-GS-CCB-MW-15	2/14/2018 9:18	-0.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	2/14/2018 9:18	6.1	pH	pH
APCO-GS-CCB-MW-15	2/14/2018 9:18	18.21	C	Temperature
APCO-GS-CCB-MW-15	2/14/2018 9:18	1.23	NTU	Turbidity
APCO-GS-CCB-MW-15	2/14/2018 9:23	2636.7	uS/cm	Conductivity
APCO-GS-CCB-MW-15	2/14/2018 9:23	67.48	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	2/14/2018 9:23	0.21	mg/L	DO
APCO-GS-CCB-MW-15	2/14/2018 9:23	2.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	2/14/2018 9:23	6.1	pH	pH
APCO-GS-CCB-MW-15	2/14/2018 9:23	18.26	C	Temperature
APCO-GS-CCB-MW-15	2/14/2018 9:23	0.99	NTU	Turbidity
APCO-GS-CCB-MW-15	2/14/2018 9:28	2636.3	uS/cm	Conductivity
APCO-GS-CCB-MW-15	2/14/2018 9:28	67.48	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	2/14/2018 9:28	0.2	mg/L	DO
APCO-GS-CCB-MW-15	2/14/2018 9:28	4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	2/14/2018 9:28	6.1	pH	pH
APCO-GS-CCB-MW-15	2/14/2018 9:28	18.21	C	Temperature
APCO-GS-CCB-MW-15	2/14/2018 9:28	0.63	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-16	2/14/2018 10:25	2562.5	uS/cm	Conductivity
APCO-GS-CCB-MW-16	2/14/2018 10:25	89.7	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	2/14/2018 10:25	0.27	mg/L	DO
APCO-GS-CCB-MW-16	2/14/2018 10:25	-9.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	2/14/2018 10:25	6.51	pH	pH
APCO-GS-CCB-MW-16	2/14/2018 10:25	18.92	C	Temperature
APCO-GS-CCB-MW-16	2/14/2018 10:25	3.01	NTU	Turbidity
APCO-GS-CCB-MW-16	2/14/2018 10:30	2552.5	uS/cm	Conductivity
APCO-GS-CCB-MW-16	2/14/2018 10:30	89.7	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	2/14/2018 10:30	0.22	mg/L	DO
APCO-GS-CCB-MW-16	2/14/2018 10:30	-2.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	2/14/2018 10:30	6.47	pH	pH
APCO-GS-CCB-MW-16	2/14/2018 10:30	18.92	C	Temperature
APCO-GS-CCB-MW-16	2/14/2018 10:30	1.01	NTU	Turbidity
APCO-GS-CCB-MW-16	2/14/2018 10:35	2550.4	uS/cm	Conductivity
APCO-GS-CCB-MW-16	2/14/2018 10:35	89.7	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	2/14/2018 10:35	0.2	mg/L	DO
APCO-GS-CCB-MW-16	2/14/2018 10:35	1.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	2/14/2018 10:35	6.46	pH	pH
APCO-GS-CCB-MW-16	2/14/2018 10:35	18.93	C	Temperature
APCO-GS-CCB-MW-16	2/14/2018 10:35	0.64	NTU	Turbidity
APCO-GS-CCB-MW-16	2/14/2018 10:40	2548	uS/cm	Conductivity
APCO-GS-CCB-MW-16	2/14/2018 10:40	89.7	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	2/14/2018 10:40	0.2	mg/L	DO
APCO-GS-CCB-MW-16	2/14/2018 10:40	4.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	2/14/2018 10:40	6.45	pH	pH
APCO-GS-CCB-MW-16	2/14/2018 10:40	18.97	C	Temperature
APCO-GS-CCB-MW-16	2/14/2018 10:40	0.83	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-18	2/14/2018 11:47	2961.9	uS/cm	Conductivity
APCO-GS-CCB-MW-18	2/14/2018 11:47	115.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	2/14/2018 11:47	2.22	mg/L	DO
APCO-GS-CCB-MW-18	2/14/2018 11:47	-24.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	2/14/2018 11:47	6.59	pH	pH
APCO-GS-CCB-MW-18	2/14/2018 11:47	19.1	C	Temperature
APCO-GS-CCB-MW-18	2/14/2018 11:47	1.39	NTU	Turbidity
APCO-GS-CCB-MW-18	2/14/2018 11:52	2948.4	uS/cm	Conductivity
APCO-GS-CCB-MW-18	2/14/2018 11:52	115.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	2/14/2018 11:52	1.01	mg/L	DO
APCO-GS-CCB-MW-18	2/14/2018 11:52	-40.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	2/14/2018 11:52	6.6	pH	pH
APCO-GS-CCB-MW-18	2/14/2018 11:52	19.25	C	Temperature
APCO-GS-CCB-MW-18	2/14/2018 11:52	0.7	NTU	Turbidity
APCO-GS-CCB-MW-18	2/14/2018 11:57	2946.3	uS/cm	Conductivity
APCO-GS-CCB-MW-18	2/14/2018 11:57	115.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	2/14/2018 11:57	0.82	mg/L	DO
APCO-GS-CCB-MW-18	2/14/2018 11:57	-25.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	2/14/2018 11:57	6.58	pH	pH
APCO-GS-CCB-MW-18	2/14/2018 11:57	19.28	C	Temperature
APCO-GS-CCB-MW-18	2/14/2018 11:57	0.54	NTU	Turbidity
APCO-GS-CCB-MW-18	2/14/2018 12:02	2942.2	uS/cm	Conductivity
APCO-GS-CCB-MW-18	2/14/2018 12:02	115.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	2/14/2018 12:02	0.76	mg/L	DO
APCO-GS-CCB-MW-18	2/14/2018 12:02	-2.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	2/14/2018 12:02	6.56	pH	pH
APCO-GS-CCB-MW-18	2/14/2018 12:02	19.24	C	Temperature
APCO-GS-CCB-MW-18	2/14/2018 12:02	0.44	NTU	Turbidity
APCO-GS-CCB-MW-18	2/14/2018 12:07	2938.9	uS/cm	Conductivity
APCO-GS-CCB-MW-18	2/14/2018 12:07	115.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	2/14/2018 12:07	0.75	mg/L	DO
APCO-GS-CCB-MW-18	2/14/2018 12:07	15.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	2/14/2018 12:07	6.53	pH	pH
APCO-GS-CCB-MW-18	2/14/2018 12:07	19.27	C	Temperature
APCO-GS-CCB-MW-18	2/14/2018 12:07	0.45	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-19	2/14/2018 13:19	3011	uS/cm	Conductivity
APCO-GS-CCB-MW-19	2/14/2018 13:19	80.77	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	2/14/2018 13:19	0.74	mg/L	DO
APCO-GS-CCB-MW-19	2/14/2018 13:19	31	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	2/14/2018 13:19	6.18	pH	pH
APCO-GS-CCB-MW-19	2/14/2018 13:19	19.26	C	Temperature
APCO-GS-CCB-MW-19	2/14/2018 13:19	26.7	NTU	Turbidity
APCO-GS-CCB-MW-19	2/14/2018 13:24	3001	uS/cm	Conductivity
APCO-GS-CCB-MW-19	2/14/2018 13:24	80.77	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	2/14/2018 13:24	0.59	mg/L	DO
APCO-GS-CCB-MW-19	2/14/2018 13:24	32.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	2/14/2018 13:24	6.18	pH	pH
APCO-GS-CCB-MW-19	2/14/2018 13:24	19.24	C	Temperature
APCO-GS-CCB-MW-19	2/14/2018 13:24	13.3	NTU	Turbidity
APCO-GS-CCB-MW-19	2/14/2018 13:29	2989.8	uS/cm	Conductivity
APCO-GS-CCB-MW-19	2/14/2018 13:29	80.77	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	2/14/2018 13:29	0.52	mg/L	DO
APCO-GS-CCB-MW-19	2/14/2018 13:29	34.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	2/14/2018 13:29	6.18	pH	pH
APCO-GS-CCB-MW-19	2/14/2018 13:29	19.23	C	Temperature
APCO-GS-CCB-MW-19	2/14/2018 13:29	7.06	NTU	Turbidity
APCO-GS-CCB-MW-19	2/14/2018 13:34	2965.9	uS/cm	Conductivity
APCO-GS-CCB-MW-19	2/14/2018 13:34	80.77	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	2/14/2018 13:34	0.46	mg/L	DO
APCO-GS-CCB-MW-19	2/14/2018 13:34	37	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	2/14/2018 13:34	6.18	pH	pH
APCO-GS-CCB-MW-19	2/14/2018 13:34	19.15	C	Temperature
APCO-GS-CCB-MW-19	2/14/2018 13:34	5.48	NTU	Turbidity
APCO-GS-CCB-MW-19	2/14/2018 13:39	2941.5	uS/cm	Conductivity
APCO-GS-CCB-MW-19	2/14/2018 13:39	80.77	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	2/14/2018 13:39	0.4	mg/L	DO
APCO-GS-CCB-MW-19	2/14/2018 13:39	39.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	2/14/2018 13:39	6.18	pH	pH
APCO-GS-CCB-MW-19	2/14/2018 13:39	19.08	C	Temperature
APCO-GS-CCB-MW-19	2/14/2018 13:39	3.75	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-20	2/14/2018 14:19	2821.5	uS/cm	Conductivity
APCO-GS-CCB-MW-20	2/14/2018 14:19	22.41	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	2/14/2018 14:19	0.15	mg/L	DO
APCO-GS-CCB-MW-20	2/14/2018 14:19	-71.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	2/14/2018 14:19	6.84	pH	pH
APCO-GS-CCB-MW-20	2/14/2018 14:19	19.06	C	Temperature
APCO-GS-CCB-MW-20	2/14/2018 14:19	0.23	NTU	Turbidity
APCO-GS-CCB-MW-20	2/14/2018 14:24	2820	uS/cm	Conductivity
APCO-GS-CCB-MW-20	2/14/2018 14:24	22.49	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	2/14/2018 14:24	0.11	mg/L	DO
APCO-GS-CCB-MW-20	2/14/2018 14:24	-67.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	2/14/2018 14:24	6.84	pH	pH
APCO-GS-CCB-MW-20	2/14/2018 14:24	19.01	C	Temperature
APCO-GS-CCB-MW-20	2/14/2018 14:24	0.18	NTU	Turbidity
APCO-GS-CCB-MW-20	2/14/2018 14:29	2816	uS/cm	Conductivity
APCO-GS-CCB-MW-20	2/14/2018 14:29	22.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	2/14/2018 14:29	0.1	mg/L	DO
APCO-GS-CCB-MW-20	2/14/2018 14:29	-65.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	2/14/2018 14:29	6.84	pH	pH
APCO-GS-CCB-MW-20	2/14/2018 14:29	18.97	C	Temperature
APCO-GS-CCB-MW-20	2/14/2018 14:29	0.17	NTU	Turbidity
APCO-GS-CCB-MW-20	2/14/2018 14:34	2815	uS/cm	Conductivity
APCO-GS-CCB-MW-20	2/14/2018 14:34	22.61	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	2/14/2018 14:34	0.09	mg/L	DO
APCO-GS-CCB-MW-20	2/14/2018 14:34	-63.6	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	2/14/2018 14:34	6.84	pH	pH
APCO-GS-CCB-MW-20	2/14/2018 14:34	18.98	C	Temperature
APCO-GS-CCB-MW-20	2/14/2018 14:34	0.17	NTU	Turbidity



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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-1	5/22/2018 15:34	2410.3	uS/cm	Conductivity
APCO-GS-CCB-MW-1	5/22/2018 15:34	91.87	ft	Depth to Water Detail
APCO-GS-CCB-MW-1	5/22/2018 15:34	0.72	mg/L	DO
APCO-GS-CCB-MW-1	5/22/2018 15:34	180.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-1	5/22/2018 15:34	5.22	pH	pH
APCO-GS-CCB-MW-1	5/22/2018 15:34	20.85	C	Temperature
APCO-GS-CCB-MW-1	5/22/2018 15:34	0.22	NTU	Turbidity
APCO-GS-CCB-MW-1	5/22/2018 15:39	2415.8	uS/cm	Conductivity
APCO-GS-CCB-MW-1	5/22/2018 15:39	91.98	ft	Depth to Water Detail
APCO-GS-CCB-MW-1	5/22/2018 15:39	0.86	mg/L	DO
APCO-GS-CCB-MW-1	5/22/2018 15:39	170.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-1	5/22/2018 15:39	5.21	pH	pH
APCO-GS-CCB-MW-1	5/22/2018 15:39	20.94	C	Temperature
APCO-GS-CCB-MW-1	5/22/2018 15:39	0.13	NTU	Turbidity
APCO-GS-CCB-MW-1	5/22/2018 15:44	2426.6	uS/cm	Conductivity
APCO-GS-CCB-MW-1	5/22/2018 15:44	92.03	ft	Depth to Water Detail
APCO-GS-CCB-MW-1	5/22/2018 15:44	0.67	mg/L	DO
APCO-GS-CCB-MW-1	5/22/2018 15:44	163.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-1	5/22/2018 15:44	5.21	pH	pH
APCO-GS-CCB-MW-1	5/22/2018 15:44	20.57	C	Temperature
APCO-GS-CCB-MW-1	5/22/2018 15:44	0.12	NTU	Turbidity
APCO-GS-CCB-MW-1	5/22/2018 15:49	2436.5	uS/cm	Conductivity
APCO-GS-CCB-MW-1	5/22/2018 15:49	92.08	ft	Depth to Water Detail
APCO-GS-CCB-MW-1	5/22/2018 15:49	0.56	mg/L	DO
APCO-GS-CCB-MW-1	5/22/2018 15:49	157.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-1	5/22/2018 15:49	5.2	pH	pH
APCO-GS-CCB-MW-1	5/22/2018 15:49	20.37	C	Temperature
APCO-GS-CCB-MW-1	5/22/2018 15:49	0.11	NTU	Turbidity
APCO-GS-CCB-MW-1	5/22/2018 15:54	2433.2	uS/cm	Conductivity
APCO-GS-CCB-MW-1	5/22/2018 15:54	92.11	ft	Depth to Water Detail
APCO-GS-CCB-MW-1	5/22/2018 15:54	0.51	mg/L	DO
APCO-GS-CCB-MW-1	5/22/2018 15:54	152.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-1	5/22/2018 15:54	5.2	pH	pH
APCO-GS-CCB-MW-1	5/22/2018 15:54	20.35	C	Temperature
APCO-GS-CCB-MW-1	5/22/2018 15:54	0.11	NTU	Turbidity

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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-2	5/22/2018 16:38	1845.3	uS/cm	Conductivity
APCO-GS-CCB-MW-2	5/22/2018 16:38	84.86	ft	Depth to Water Detail
APCO-GS-CCB-MW-2	5/22/2018 16:38	0.17	mg/L	DO
APCO-GS-CCB-MW-2	5/22/2018 16:38	33.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-2	5/22/2018 16:38	6.06	pH	pH
APCO-GS-CCB-MW-2	5/22/2018 16:38	19.68	C	Temperature
APCO-GS-CCB-MW-2	5/22/2018 16:38	6.54	NTU	Turbidity
APCO-GS-CCB-MW-2	5/22/2018 16:43	1832.2	uS/cm	Conductivity
APCO-GS-CCB-MW-2	5/22/2018 16:43	84.86	ft	Depth to Water Detail
APCO-GS-CCB-MW-2	5/22/2018 16:43	0.17	mg/L	DO
APCO-GS-CCB-MW-2	5/22/2018 16:43	39.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-2	5/22/2018 16:43	6.05	pH	pH
APCO-GS-CCB-MW-2	5/22/2018 16:43	19.59	C	Temperature
APCO-GS-CCB-MW-2	5/22/2018 16:43	2.12	NTU	Turbidity
APCO-GS-CCB-MW-2	5/22/2018 16:48	1825.3	uS/cm	Conductivity
APCO-GS-CCB-MW-2	5/22/2018 16:48	84.86	ft	Depth to Water Detail
APCO-GS-CCB-MW-2	5/22/2018 16:48	0.16	mg/L	DO
APCO-GS-CCB-MW-2	5/22/2018 16:48	41.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-2	5/22/2018 16:48	6.04	pH	pH
APCO-GS-CCB-MW-2	5/22/2018 16:48	19.55	C	Temperature
APCO-GS-CCB-MW-2	5/22/2018 16:48	0.89	NTU	Turbidity
APCO-GS-CCB-MW-2	5/22/2018 16:53	1815.5	uS/cm	Conductivity
APCO-GS-CCB-MW-2	5/22/2018 16:53	84.86	ft	Depth to Water Detail
APCO-GS-CCB-MW-2	5/22/2018 16:53	0.16	mg/L	DO
APCO-GS-CCB-MW-2	5/22/2018 16:53	44	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-2	5/22/2018 16:53	6.04	pH	pH
APCO-GS-CCB-MW-2	5/22/2018 16:53	19.5	C	Temperature
APCO-GS-CCB-MW-2	5/22/2018 16:53	0.65	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-3	5/24/2018 9:32	3119.8	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 9:32	110.08	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 9:32	8.21	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 9:32	107.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	5/24/2018 9:32	6.52	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 9:32	22.55	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 9:32	0.27	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 9:37	3745.5	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 9:37	110.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 9:37	4.52	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 9:37	139.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	5/24/2018 9:37	5.69	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 9:37	22.35	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 9:37	24.8	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 9:42	3830.9	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 9:42	110.5	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 9:42	3.05	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 9:42	151.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	5/24/2018 9:42	5.37	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 9:42	22.46	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 9:42	24.8	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 9:47	3807.7	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 9:47	110.64	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 9:47	2.82	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 9:47	146.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	5/24/2018 9:47	5.34	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 9:47	22.48	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 9:47	10.47	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 9:52	3808.2	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 9:52	110.73	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 9:52	2.69	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 9:52	142.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	5/24/2018 9:52	5.31	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 9:52	22.53	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 9:52	6.45	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 9:57	3822.6	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 9:57	110.81	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 9:57	2.52	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 9:57	138.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	5/24/2018 9:57	5.29	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 9:57	22.65	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 9:57	4.12	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 10:02	3820.4	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 10:02	110.88	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 10:02	2.33	mg/L	DO

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-3	5/24/2018 10:02	135.5	mv	Oxidation Reduction Potential
APCO-GS-CCB-MW-3	5/24/2018 10:02	5.29	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 10:02	22.73	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 10:02	4.19	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 10:07	3810	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 10:07	110.95	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 10:07	2.12	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 10:07	132	mv	Oxidation Reduction Potential
APCO-GS-CCB-MW-3	5/24/2018 10:07	5.29	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 10:07	22.73	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 10:07	2.94	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 10:12	3795	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 10:12	111.02	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 10:12	1.8	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 10:12	130.6	mv	Oxidation Reduction Potential
APCO-GS-CCB-MW-3	5/24/2018 10:12	5.25	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 10:12	22.9	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 10:12	1.84	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 10:17	3773.9	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 10:17	111.06	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 10:17	1.57	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 10:17	129.4	mv	Oxidation Reduction Potential
APCO-GS-CCB-MW-3	5/24/2018 10:17	5.22	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 10:17	22.8	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 10:17	2.04	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 10:22	3732.9	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 10:22	111.11	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 10:22	1.38	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 10:22	129.1	mv	Oxidation Reduction Potential
APCO-GS-CCB-MW-3	5/24/2018 10:22	5.2	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 10:22	22.87	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 10:22	1.6	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 10:27	3685.1	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 10:27	111.15	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 10:27	1.25	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 10:27	128.9	mv	Oxidation Reduction Potential
APCO-GS-CCB-MW-3	5/24/2018 10:27	5.18	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 10:27	23.07	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 10:27	1.34	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 10:32	3642.4	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 10:32	111.18	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 10:32	1.15	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 10:32	128	mv	Oxidation Reduction Potential
APCO-GS-CCB-MW-3	5/24/2018 10:32	5.18	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 10:32	23.21	C	Temperature

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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-3	5/24/2018 10:32	1.25	NTU	Turbidity
APCO-GS-CCB-MW-3	5/24/2018 10:37	3588.8	uS/cm	Conductivity
APCO-GS-CCB-MW-3	5/24/2018 10:37	111.21	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	5/24/2018 10:37	1.05	mg/L	DO
APCO-GS-CCB-MW-3	5/24/2018 10:37	126.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	5/24/2018 10:37	5.19	pH	pH
APCO-GS-CCB-MW-3	5/24/2018 10:37	23.26	C	Temperature
APCO-GS-CCB-MW-3	5/24/2018 10:37	0.91	NTU	Turbidity

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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-4	5/23/2018 14:59	3589.5	uS/cm	Conductivity
APCO-GS-CCB-MW-4	5/23/2018 14:59	116.48	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	5/23/2018 14:59	2.26	mg/L	DO
APCO-GS-CCB-MW-4	5/23/2018 14:59	107.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	5/23/2018 14:59	6.22	pH	pH
APCO-GS-CCB-MW-4	5/23/2018 14:59	21.21	C	Temperature
APCO-GS-CCB-MW-4	5/23/2018 14:59	2.26	NTU	Turbidity
APCO-GS-CCB-MW-4	5/23/2018 15:04	3598.3	uS/cm	Conductivity
APCO-GS-CCB-MW-4	5/23/2018 15:04	116.48	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	5/23/2018 15:04	2.18	mg/L	DO
APCO-GS-CCB-MW-4	5/23/2018 15:04	104.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	5/23/2018 15:04	6.21	pH	pH
APCO-GS-CCB-MW-4	5/23/2018 15:04	21.11	C	Temperature
APCO-GS-CCB-MW-4	5/23/2018 15:04	1.99	NTU	Turbidity
APCO-GS-CCB-MW-4	5/23/2018 15:09	3596.1	uS/cm	Conductivity
APCO-GS-CCB-MW-4	5/23/2018 15:09	116.48	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	5/23/2018 15:09	2.17	mg/L	DO
APCO-GS-CCB-MW-4	5/23/2018 15:09	102	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	5/23/2018 15:09	6.21	pH	pH
APCO-GS-CCB-MW-4	5/23/2018 15:09	21.03	C	Temperature
APCO-GS-CCB-MW-4	5/23/2018 15:09	2.14	NTU	Turbidity
APCO-GS-CCB-MW-4	5/23/2018 15:14	3598.8	uS/cm	Conductivity
APCO-GS-CCB-MW-4	5/23/2018 15:14	116.48	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	5/23/2018 15:14	2.16	mg/L	DO
APCO-GS-CCB-MW-4	5/23/2018 15:14	99.6	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	5/23/2018 15:14	6.21	pH	pH
APCO-GS-CCB-MW-4	5/23/2018 15:14	20.97	C	Temperature
APCO-GS-CCB-MW-4	5/23/2018 15:14	2.06	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-13	5/21/2018 11:37	3024.6	uS/cm	Conductivity
APCO-GS-CCB-MW-13	5/21/2018 11:37	94.91	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	5/21/2018 11:37	1.52	mg/L	DO
APCO-GS-CCB-MW-13	5/21/2018 11:37	54.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	5/21/2018 11:37	6.44	pH	pH
APCO-GS-CCB-MW-13	5/21/2018 11:37	22.4	C	Temperature
APCO-GS-CCB-MW-13	5/21/2018 11:37	0.34	NTU	Turbidity
APCO-GS-CCB-MW-13	5/21/2018 11:42	3034.8	uS/cm	Conductivity
APCO-GS-CCB-MW-13	5/21/2018 11:42	95.06	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	5/21/2018 11:42	0.7	mg/L	DO
APCO-GS-CCB-MW-13	5/21/2018 11:42	51.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	5/21/2018 11:42	6.4	pH	pH
APCO-GS-CCB-MW-13	5/21/2018 11:42	22.02	C	Temperature
APCO-GS-CCB-MW-13	5/21/2018 11:42	0.31	NTU	Turbidity
APCO-GS-CCB-MW-13	5/21/2018 11:47	3028.3	uS/cm	Conductivity
APCO-GS-CCB-MW-13	5/21/2018 11:47	95.18	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	5/21/2018 11:47	0.53	mg/L	DO
APCO-GS-CCB-MW-13	5/21/2018 11:47	50.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	5/21/2018 11:47	6.4	pH	pH
APCO-GS-CCB-MW-13	5/21/2018 11:47	22.01	C	Temperature
APCO-GS-CCB-MW-13	5/21/2018 11:47	0.28	NTU	Turbidity
APCO-GS-CCB-MW-13	5/21/2018 11:52	3016.2	uS/cm	Conductivity
APCO-GS-CCB-MW-13	5/21/2018 11:52	95.27	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	5/21/2018 11:52	0.49	mg/L	DO
APCO-GS-CCB-MW-13	5/21/2018 11:52	44.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	5/21/2018 11:52	6.4	pH	pH
APCO-GS-CCB-MW-13	5/21/2018 11:52	21.82	C	Temperature
APCO-GS-CCB-MW-13	5/21/2018 11:52	0.22	NTU	Turbidity
APCO-GS-CCB-MW-13	5/21/2018 11:57	2998.1	uS/cm	Conductivity
APCO-GS-CCB-MW-13	5/21/2018 11:57	95.32	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	5/21/2018 11:57	0.53	mg/L	DO
APCO-GS-CCB-MW-13	5/21/2018 11:57	42.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	5/21/2018 11:57	6.41	pH	pH
APCO-GS-CCB-MW-13	5/21/2018 11:57	21.8	C	Temperature
APCO-GS-CCB-MW-13	5/21/2018 11:57	0.15	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-14	5/21/2018 12:45	3094.6	uS/cm	Conductivity
APCO-GS-CCB-MW-14	5/21/2018 12:45	89.29	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	5/21/2018 12:45	1.12	mg/L	DO
APCO-GS-CCB-MW-14	5/21/2018 12:45	14.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	5/21/2018 12:45	6.38	pH	pH
APCO-GS-CCB-MW-14	5/21/2018 12:45	20.77	C	Temperature
APCO-GS-CCB-MW-14	5/21/2018 12:45	0.31	NTU	Turbidity
APCO-GS-CCB-MW-14	5/21/2018 12:50	3110.5	uS/cm	Conductivity
APCO-GS-CCB-MW-14	5/21/2018 12:50	89.29	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	5/21/2018 12:50	0.47	mg/L	DO
APCO-GS-CCB-MW-14	5/21/2018 12:50	18.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	5/21/2018 12:50	6.38	pH	pH
APCO-GS-CCB-MW-14	5/21/2018 12:50	20.78	C	Temperature
APCO-GS-CCB-MW-14	5/21/2018 12:50	0.24	NTU	Turbidity
APCO-GS-CCB-MW-14	5/21/2018 12:55	3083	uS/cm	Conductivity
APCO-GS-CCB-MW-14	5/21/2018 12:55	89.29	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	5/21/2018 12:55	1.07	mg/L	DO
APCO-GS-CCB-MW-14	5/21/2018 12:55	17.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	5/21/2018 12:55	6.4	pH	pH
APCO-GS-CCB-MW-14	5/21/2018 12:55	20.59	C	Temperature
APCO-GS-CCB-MW-14	5/21/2018 12:55	0.17	NTU	Turbidity
APCO-GS-CCB-MW-14	5/21/2018 13:00	3120.3	uS/cm	Conductivity
APCO-GS-CCB-MW-14	5/21/2018 13:00	89.29	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	5/21/2018 13:00	0.74	mg/L	DO
APCO-GS-CCB-MW-14	5/21/2018 13:00	19	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	5/21/2018 13:00	6.38	pH	pH
APCO-GS-CCB-MW-14	5/21/2018 13:00	20.56	C	Temperature
APCO-GS-CCB-MW-14	5/21/2018 13:00	0.15	NTU	Turbidity
APCO-GS-CCB-MW-14	5/21/2018 13:05	3078.8	uS/cm	Conductivity
APCO-GS-CCB-MW-14	5/21/2018 13:05	89.29	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	5/21/2018 13:05	0.64	mg/L	DO
APCO-GS-CCB-MW-14	5/21/2018 13:05	19.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	5/21/2018 13:05	6.38	pH	pH
APCO-GS-CCB-MW-14	5/21/2018 13:05	20.58	C	Temperature
APCO-GS-CCB-MW-14	5/21/2018 13:05	0.18	NTU	Turbidity
APCO-GS-CCB-MW-14	5/21/2018 13:10	3131.4	uS/cm	Conductivity
APCO-GS-CCB-MW-14	5/21/2018 13:10	89.29	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	5/21/2018 13:10	0.76	mg/L	DO
APCO-GS-CCB-MW-14	5/21/2018 13:10	19.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	5/21/2018 13:10	6.38	pH	pH
APCO-GS-CCB-MW-14	5/21/2018 13:10	20.62	C	Temperature
APCO-GS-CCB-MW-14	5/21/2018 13:10	0.15	NTU	Turbidity



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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-15	5/21/2018 14:04	2680.5	uS/cm	Conductivity
APCO-GS-CCB-MW-15	5/21/2018 14:04	67.79	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	5/21/2018 14:04	0.73	mg/L	DO
APCO-GS-CCB-MW-15	5/21/2018 14:04	0.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	5/21/2018 14:04	6.06	pH	pH
APCO-GS-CCB-MW-15	5/21/2018 14:04	20.59	C	Temperature
APCO-GS-CCB-MW-15	5/21/2018 14:04	2.11	NTU	Turbidity
APCO-GS-CCB-MW-15	5/21/2018 14:09	2617.7	uS/cm	Conductivity
APCO-GS-CCB-MW-15	5/21/2018 14:09	67.81	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	5/21/2018 14:09	0.79	mg/L	DO
APCO-GS-CCB-MW-15	5/21/2018 14:09	6	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	5/21/2018 14:09	6.06	pH	pH
APCO-GS-CCB-MW-15	5/21/2018 14:09	20.26	C	Temperature
APCO-GS-CCB-MW-15	5/21/2018 14:09	4.58	NTU	Turbidity
APCO-GS-CCB-MW-15	5/21/2018 14:14	2605.7	uS/cm	Conductivity
APCO-GS-CCB-MW-15	5/21/2018 14:14	67.83	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	5/21/2018 14:14	1	mg/L	DO
APCO-GS-CCB-MW-15	5/21/2018 14:14	6.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	5/21/2018 14:14	6.06	pH	pH
APCO-GS-CCB-MW-15	5/21/2018 14:14	20.26	C	Temperature
APCO-GS-CCB-MW-15	5/21/2018 14:14	3.19	NTU	Turbidity
APCO-GS-CCB-MW-15	5/21/2018 14:19	2594.8	uS/cm	Conductivity
APCO-GS-CCB-MW-15	5/21/2018 14:19	67.85	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	5/21/2018 14:19	1.24	mg/L	DO
APCO-GS-CCB-MW-15	5/21/2018 14:19	6.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	5/21/2018 14:19	6.06	pH	pH
APCO-GS-CCB-MW-15	5/21/2018 14:19	20.22	C	Temperature
APCO-GS-CCB-MW-15	5/21/2018 14:19	2.01	NTU	Turbidity
APCO-GS-CCB-MW-15	5/21/2018 14:24	2604.7	uS/cm	Conductivity
APCO-GS-CCB-MW-15	5/21/2018 14:24	67.86	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	5/21/2018 14:24	0.89	mg/L	DO
APCO-GS-CCB-MW-15	5/21/2018 14:24	7.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	5/21/2018 14:24	6.06	pH	pH
APCO-GS-CCB-MW-15	5/21/2018 14:24	20.15	C	Temperature
APCO-GS-CCB-MW-15	5/21/2018 14:24	1.44	NTU	Turbidity
APCO-GS-CCB-MW-15	5/21/2018 14:29	2604.3	uS/cm	Conductivity
APCO-GS-CCB-MW-15	5/21/2018 14:29	67.87	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	5/21/2018 14:29	0.78	mg/L	DO
APCO-GS-CCB-MW-15	5/21/2018 14:29	7.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	5/21/2018 14:29	6.07	pH	pH
APCO-GS-CCB-MW-15	5/21/2018 14:29	20.22	C	Temperature
APCO-GS-CCB-MW-15	5/21/2018 14:29	0.82	NTU	Turbidity
APCO-GS-CCB-MW-15	5/21/2018 14:34	2609.9	uS/cm	Conductivity
APCO-GS-CCB-MW-15	5/21/2018 14:34	67.88	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	5/21/2018 14:34	0.94	mg/L	DO

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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-15	5/21/2018 14:34	8.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	5/21/2018 14:34	6.06	pH	pH
APCO-GS-CCB-MW-15	5/21/2018 14:34	20.24	C	Temperature
APCO-GS-CCB-MW-15	5/21/2018 14:34	1.33	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-16	5/21/2018 15:31	2630.2	uS/cm	Conductivity
APCO-GS-CCB-MW-16	5/21/2018 15:31	91.29	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	5/21/2018 15:31	0.28	mg/L	DO
APCO-GS-CCB-MW-16	5/21/2018 15:31	-29.6	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	5/21/2018 15:31	6.48	pH	pH
APCO-GS-CCB-MW-16	5/21/2018 15:31	20.83	C	Temperature
APCO-GS-CCB-MW-16	5/21/2018 15:31	0.63	NTU	Turbidity
APCO-GS-CCB-MW-16	5/21/2018 15:36	2614.2	uS/cm	Conductivity
APCO-GS-CCB-MW-16	5/21/2018 15:36	91.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	5/21/2018 15:36	0.29	mg/L	DO
APCO-GS-CCB-MW-16	5/21/2018 15:36	-14.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	5/21/2018 15:36	6.45	pH	pH
APCO-GS-CCB-MW-16	5/21/2018 15:36	20.65	C	Temperature
APCO-GS-CCB-MW-16	5/21/2018 15:36	0.45	NTU	Turbidity
APCO-GS-CCB-MW-16	5/21/2018 15:41	2618.3	uS/cm	Conductivity
APCO-GS-CCB-MW-16	5/21/2018 15:41	91.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	5/21/2018 15:41	0.36	mg/L	DO
APCO-GS-CCB-MW-16	5/21/2018 15:41	-12.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	5/21/2018 15:41	6.45	pH	pH
APCO-GS-CCB-MW-16	5/21/2018 15:41	20.57	C	Temperature
APCO-GS-CCB-MW-16	5/21/2018 15:41	0.17	NTU	Turbidity
APCO-GS-CCB-MW-16	5/21/2018 15:46	2623.3	uS/cm	Conductivity
APCO-GS-CCB-MW-16	5/21/2018 15:46	91.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	5/21/2018 15:46	0.61	mg/L	DO
APCO-GS-CCB-MW-16	5/21/2018 15:46	-10.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	5/21/2018 15:46	6.45	pH	pH
APCO-GS-CCB-MW-16	5/21/2018 15:46	20.69	C	Temperature
APCO-GS-CCB-MW-16	5/21/2018 15:46	0.17	NTU	Turbidity
APCO-GS-CCB-MW-16	5/21/2018 15:51	2624.1	uS/cm	Conductivity
APCO-GS-CCB-MW-16	5/21/2018 15:51	91.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	5/21/2018 15:51	0.3	mg/L	DO
APCO-GS-CCB-MW-16	5/21/2018 15:51	-9.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	5/21/2018 15:51	6.45	pH	pH
APCO-GS-CCB-MW-16	5/21/2018 15:51	20.61	C	Temperature
APCO-GS-CCB-MW-16	5/21/2018 15:51	0.27	NTU	Turbidity
APCO-GS-CCB-MW-16	5/21/2018 15:56	2603.9	uS/cm	Conductivity
APCO-GS-CCB-MW-16	5/21/2018 15:56	91.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	5/21/2018 15:56	0.31	mg/L	DO
APCO-GS-CCB-MW-16	5/21/2018 15:56	-8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	5/21/2018 15:56	6.45	pH	pH
APCO-GS-CCB-MW-16	5/21/2018 15:56	20.62	C	Temperature
APCO-GS-CCB-MW-16	5/21/2018 15:56	0.13	NTU	Turbidity
APCO-GS-CCB-MW-16	5/21/2018 16:01	2602.4	uS/cm	Conductivity
APCO-GS-CCB-MW-16	5/21/2018 16:01	91.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	5/21/2018 16:01	0.28	mg/L	DO

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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-16	5/21/2018 16:01	-6.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	5/21/2018 16:01	6.45	pH	pH
APCO-GS-CCB-MW-16	5/21/2018 16:01	20.69	C	Temperature
APCO-GS-CCB-MW-16	5/21/2018 16:01	0.2	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-18	5/22/2018 10:43	3086.5	uS/cm	Conductivity
APCO-GS-CCB-MW-18	5/22/2018 10:43	126.16	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	5/22/2018 10:43	3.18	mg/L	DO
APCO-GS-CCB-MW-18	5/22/2018 10:43	90.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	5/22/2018 10:43	6.51	pH	pH
APCO-GS-CCB-MW-18	5/22/2018 10:43	21.25	C	Temperature
APCO-GS-CCB-MW-18	5/22/2018 10:43	3.23	NTU	Turbidity
APCO-GS-CCB-MW-18	5/22/2018 10:48	3091.3	uS/cm	Conductivity
APCO-GS-CCB-MW-18	5/22/2018 10:48	126.16	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	5/22/2018 10:48	3.11	mg/L	DO
APCO-GS-CCB-MW-18	5/22/2018 10:48	86.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	5/22/2018 10:48	6.51	pH	pH
APCO-GS-CCB-MW-18	5/22/2018 10:48	21.21	C	Temperature
APCO-GS-CCB-MW-18	5/22/2018 10:48	2.97	NTU	Turbidity
APCO-GS-CCB-MW-18	5/22/2018 10:53	3086.3	uS/cm	Conductivity
APCO-GS-CCB-MW-18	5/22/2018 10:53	126.16	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	5/22/2018 10:53	3.1	mg/L	DO
APCO-GS-CCB-MW-18	5/22/2018 10:53	83.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	5/22/2018 10:53	6.5	pH	pH
APCO-GS-CCB-MW-18	5/22/2018 10:53	21.2	C	Temperature
APCO-GS-CCB-MW-18	5/22/2018 10:53	2.64	NTU	Turbidity
APCO-GS-CCB-MW-18	5/22/2018 10:58	3085.3	uS/cm	Conductivity
APCO-GS-CCB-MW-18	5/22/2018 10:58	126.16	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	5/22/2018 10:58	3.1	mg/L	DO
APCO-GS-CCB-MW-18	5/22/2018 10:58	81.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	5/22/2018 10:58	6.5	pH	pH
APCO-GS-CCB-MW-18	5/22/2018 10:58	21.18	C	Temperature
APCO-GS-CCB-MW-18	5/22/2018 10:58	2.58	NTU	Turbidity

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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-19	5/22/2018 11:49	2781.6	uS/cm	Conductivity
APCO-GS-CCB-MW-19	5/22/2018 11:49	81.57	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	5/22/2018 11:49	0.26	mg/L	DO
APCO-GS-CCB-MW-19	5/22/2018 11:49	48.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	5/22/2018 11:49	6.14	pH	pH
APCO-GS-CCB-MW-19	5/22/2018 11:49	20.61	C	Temperature
APCO-GS-CCB-MW-19	5/22/2018 11:49	9.29	NTU	Turbidity
APCO-GS-CCB-MW-19	5/22/2018 11:54	2806.6	uS/cm	Conductivity
APCO-GS-CCB-MW-19	5/22/2018 11:54	81.57	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	5/22/2018 11:54	0.19	mg/L	DO
APCO-GS-CCB-MW-19	5/22/2018 11:54	49.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	5/22/2018 11:54	6.13	pH	pH
APCO-GS-CCB-MW-19	5/22/2018 11:54	20.6	C	Temperature
APCO-GS-CCB-MW-19	5/22/2018 11:54	5.17	NTU	Turbidity
APCO-GS-CCB-MW-19	5/22/2018 11:59	2809.2	uS/cm	Conductivity
APCO-GS-CCB-MW-19	5/22/2018 11:59	81.57	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	5/22/2018 11:59	0.19	mg/L	DO
APCO-GS-CCB-MW-19	5/22/2018 11:59	49.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	5/22/2018 11:59	6.13	pH	pH
APCO-GS-CCB-MW-19	5/22/2018 11:59	20.42	C	Temperature
APCO-GS-CCB-MW-19	5/22/2018 11:59	2.84	NTU	Turbidity
APCO-GS-CCB-MW-19	5/22/2018 12:05	2811.4	uS/cm	Conductivity
APCO-GS-CCB-MW-19	5/22/2018 12:05	81.57	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	5/22/2018 12:05	0.18	mg/L	DO
APCO-GS-CCB-MW-19	5/22/2018 12:05	49.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	5/22/2018 12:05	6.13	pH	pH
APCO-GS-CCB-MW-19	5/22/2018 12:05	20.39	C	Temperature
APCO-GS-CCB-MW-19	5/22/2018 12:05	1.95	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-20	5/22/2018 13:00	2873.9	uS/cm	Conductivity
APCO-GS-CCB-MW-20	5/22/2018 13:00	23.29	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	5/22/2018 13:00	0.71	mg/L	DO
APCO-GS-CCB-MW-20	5/22/2018 13:00	-82.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	5/22/2018 13:00	6.8	pH	pH
APCO-GS-CCB-MW-20	5/22/2018 13:00	21.18	C	Temperature
APCO-GS-CCB-MW-20	5/22/2018 13:00	0.32	NTU	Turbidity
APCO-GS-CCB-MW-20	5/22/2018 13:05	2868.6	uS/cm	Conductivity
APCO-GS-CCB-MW-20	5/22/2018 13:05	23.42	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	5/22/2018 13:05	0.62	mg/L	DO
APCO-GS-CCB-MW-20	5/22/2018 13:05	-78.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	5/22/2018 13:05	6.81	pH	pH
APCO-GS-CCB-MW-20	5/22/2018 13:05	21.11	C	Temperature
APCO-GS-CCB-MW-20	5/22/2018 13:05	0.12	NTU	Turbidity
APCO-GS-CCB-MW-20	5/22/2018 13:10	2861.7	uS/cm	Conductivity
APCO-GS-CCB-MW-20	5/22/2018 13:10	23.49	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	5/22/2018 13:10	0.54	mg/L	DO
APCO-GS-CCB-MW-20	5/22/2018 13:10	-74.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	5/22/2018 13:10	6.81	pH	pH
APCO-GS-CCB-MW-20	5/22/2018 13:10	20.66	C	Temperature
APCO-GS-CCB-MW-20	5/22/2018 13:10	0.1	NTU	Turbidity
APCO-GS-CCB-MW-20	5/22/2018 13:15	2853.3	uS/cm	Conductivity
APCO-GS-CCB-MW-20	5/22/2018 13:15	23.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	5/22/2018 13:15	0.45	mg/L	DO
APCO-GS-CCB-MW-20	5/22/2018 13:15	-72.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	5/22/2018 13:15	6.81	pH	pH
APCO-GS-CCB-MW-20	5/22/2018 13:15	20.67	C	Temperature
APCO-GS-CCB-MW-20	5/22/2018 13:15	0.1	NTU	Turbidity

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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-1	11/19/2018 10:09	2332.3	uS/cm	Conductivity
APCO-GS-CCB-MW-1	11/19/2018 10:09	93.2	ft	Depth to Water Detail
APCO-GS-CCB-MW-1	11/19/2018 10:09	0.54	mg/L	DO
APCO-GS-CCB-MW-1	11/19/2018 10:09	143.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-1	11/19/2018 10:09	5.09	pH	pH
APCO-GS-CCB-MW-1	11/19/2018 10:09	19.41	C	Temperature
APCO-GS-CCB-MW-1	11/19/2018 10:09	0.4	NTU	Turbidity
APCO-GS-CCB-MW-1	11/19/2018 10:19	2334.8	uS/cm	Conductivity
APCO-GS-CCB-MW-1	11/19/2018 10:19	93.22	ft	Depth to Water Detail
APCO-GS-CCB-MW-1	11/19/2018 10:19	0.47	mg/L	DO
APCO-GS-CCB-MW-1	11/19/2018 10:19	135.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-1	11/19/2018 10:19	5.09	pH	pH
APCO-GS-CCB-MW-1	11/19/2018 10:19	19.06	C	Temperature
APCO-GS-CCB-MW-1	11/19/2018 10:19	0.2	NTU	Turbidity
APCO-GS-CCB-MW-1	11/19/2018 10:24	2337.1	uS/cm	Conductivity
APCO-GS-CCB-MW-1	11/19/2018 10:24	93.22	ft	Depth to Water Detail
APCO-GS-CCB-MW-1	11/19/2018 10:24	0.46	mg/L	DO
APCO-GS-CCB-MW-1	11/19/2018 10:24	134.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-1	11/19/2018 10:24	5.09	pH	pH
APCO-GS-CCB-MW-1	11/19/2018 10:24	19.05	C	Temperature
APCO-GS-CCB-MW-1	11/19/2018 10:24	0.38	NTU	Turbidity
APCO-GS-CCB-MW-1	11/19/2018 10:29	2339	uS/cm	Conductivity
APCO-GS-CCB-MW-1	11/19/2018 10:29	93.22	ft	Depth to Water Detail
APCO-GS-CCB-MW-1	11/19/2018 10:29	0.46	mg/L	DO
APCO-GS-CCB-MW-1	11/19/2018 10:29	130.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-1	11/19/2018 10:29	5.09	pH	pH
APCO-GS-CCB-MW-1	11/19/2018 10:29	19	C	Temperature
APCO-GS-CCB-MW-1	11/19/2018 10:29	0.25	NTU	Turbidity



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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-2	11/19/2018 11:20	2221.6	uS/cm	Conductivity
APCO-GS-CCB-MW-2	11/19/2018 11:20	84.5	ft	Depth to Water Detail
APCO-GS-CCB-MW-2	11/19/2018 11:20	0.19	mg/L	DO
APCO-GS-CCB-MW-2	11/19/2018 11:20	52.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-2	11/19/2018 11:20	6.03	pH	pH
APCO-GS-CCB-MW-2	11/19/2018 11:20	18.84	C	Temperature
APCO-GS-CCB-MW-2	11/19/2018 11:20	2.27	NTU	Turbidity
APCO-GS-CCB-MW-2	11/19/2018 11:25	2228.4	uS/cm	Conductivity
APCO-GS-CCB-MW-2	11/19/2018 11:25	84.5	ft	Depth to Water Detail
APCO-GS-CCB-MW-2	11/19/2018 11:25	0.16	mg/L	DO
APCO-GS-CCB-MW-2	11/19/2018 11:25	46	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-2	11/19/2018 11:25	6.03	pH	pH
APCO-GS-CCB-MW-2	11/19/2018 11:25	18.79	C	Temperature
APCO-GS-CCB-MW-2	11/19/2018 11:25	1.65	NTU	Turbidity
APCO-GS-CCB-MW-2	11/19/2018 11:30	2231.9	uS/cm	Conductivity
APCO-GS-CCB-MW-2	11/19/2018 11:30	84.5	ft	Depth to Water Detail
APCO-GS-CCB-MW-2	11/19/2018 11:30	0.16	mg/L	DO
APCO-GS-CCB-MW-2	11/19/2018 11:30	42.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-2	11/19/2018 11:30	6.03	pH	pH
APCO-GS-CCB-MW-2	11/19/2018 11:30	18.75	C	Temperature
APCO-GS-CCB-MW-2	11/19/2018 11:30	1.43	NTU	Turbidity
APCO-GS-CCB-MW-2	11/19/2018 11:35	2231.6	uS/cm	Conductivity
APCO-GS-CCB-MW-2	11/19/2018 11:35	84.5	ft	Depth to Water Detail
APCO-GS-CCB-MW-2	11/19/2018 11:35	0.15	mg/L	DO
APCO-GS-CCB-MW-2	11/19/2018 11:35	42.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-2	11/19/2018 11:35	6.03	pH	pH
APCO-GS-CCB-MW-2	11/19/2018 11:35	18.78	C	Temperature
APCO-GS-CCB-MW-2	11/19/2018 11:35	1.33	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-3	11/19/2018 12:21	4427.8	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 12:21	110.2	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 12:21	8.47	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 12:21	417.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 12:21	3.46	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 12:21	20.08	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 12:21	14.7	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 12:26	5081.1	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 12:26	110.33	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 12:26	2.35	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 12:26	398	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 12:26	3.91	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 12:26	19.56	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 12:26	16.9	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 12:31	5125.9	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 12:31	110.43	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 12:31	1.98	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 12:31	384.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 12:31	4.12	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 12:31	19.47	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 12:31	18.6	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 12:36	5163.1	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 12:36	110.56	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 12:36	2.03	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 12:36	373	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 12:36	4.2	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 12:36	19.41	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 12:36	17.1	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 12:41	5186.1	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 12:41	110.65	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 12:41	2.07	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 12:41	366.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 12:41	4.21	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 12:41	19.46	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 12:41	13.1	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 12:46	5172.9	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 12:46	110.76	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 12:46	1.95	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 12:46	364.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 12:46	4.18	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 12:46	19.36	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 12:46	10.81	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 12:51	5139.9	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 12:51	110.82	ft	Depth to Water Detail

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-3	11/19/2018 12:51	1.72	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 12:51	358.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 12:51	4.11	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 12:51	19.11	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 12:51	6.96	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 12:56	5084.1	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 12:56	110.88	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 12:56	1.45	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 12:56	360.4	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 12:56	3.98	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 12:56	19.01	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 12:56	5.28	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 13:01	5045.2	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 13:01	110.95	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 13:01	1.15	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 13:01	363	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 13:01	3.87	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 13:01	18.82	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 13:01	5	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 13:06	5005.1	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 13:06	110.98	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 13:06	0.98	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 13:06	362.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 13:06	3.81	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 13:06	18.75	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 13:06	2.6	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 13:12	4964.8	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 13:12	111.05	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 13:12	0.83	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 13:12	361.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 13:12	3.77	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 13:12	18.82	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 13:12	2.11	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 13:17	4907.1	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 13:17	111.12	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 13:17	0.73	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 13:17	358.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-3	11/19/2018 13:17	3.76	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 13:17	18.92	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 13:17	1.64	NTU	Turbidity
APCO-GS-CCB-MW-3	11/19/2018 13:22	4852	uS/cm	Conductivity
APCO-GS-CCB-MW-3	11/19/2018 13:22	111.13	ft	Depth to Water Detail
APCO-GS-CCB-MW-3	11/19/2018 13:22	0.66	mg/L	DO
APCO-GS-CCB-MW-3	11/19/2018 13:22	353.4	mv	Oxidation Reduction Potention

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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-3	11/19/2018 13:22	3.77	pH	pH
APCO-GS-CCB-MW-3	11/19/2018 13:22	18.93	C	Temperature
APCO-GS-CCB-MW-3	11/19/2018 13:22	1.67	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-4	11/19/2018 14:28	4119.3	uS/cm	Conductivity
APCO-GS-CCB-MW-4	11/19/2018 14:28	116.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	11/19/2018 14:28	0.91	mg/L	DO
APCO-GS-CCB-MW-4	11/19/2018 14:28	118.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	11/19/2018 14:28	6.06	pH	pH
APCO-GS-CCB-MW-4	11/19/2018 14:28	19.81	C	Temperature
APCO-GS-CCB-MW-4	11/19/2018 14:28	0.79	NTU	Turbidity
APCO-GS-CCB-MW-4	11/19/2018 14:33	4088	uS/cm	Conductivity
APCO-GS-CCB-MW-4	11/19/2018 14:33	116.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	11/19/2018 14:33	0.76	mg/L	DO
APCO-GS-CCB-MW-4	11/19/2018 14:33	111.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	11/19/2018 14:33	6.07	pH	pH
APCO-GS-CCB-MW-4	11/19/2018 14:33	19.81	C	Temperature
APCO-GS-CCB-MW-4	11/19/2018 14:33	0.8	NTU	Turbidity
APCO-GS-CCB-MW-4	11/19/2018 14:38	3955	uS/cm	Conductivity
APCO-GS-CCB-MW-4	11/19/2018 14:38	116.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	11/19/2018 14:38	1.2	mg/L	DO
APCO-GS-CCB-MW-4	11/19/2018 14:38	111.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	11/19/2018 14:38	6.09	pH	pH
APCO-GS-CCB-MW-4	11/19/2018 14:38	19.82	C	Temperature
APCO-GS-CCB-MW-4	11/19/2018 14:38	0.74	NTU	Turbidity
APCO-GS-CCB-MW-4	11/19/2018 14:43	3767.2	uS/cm	Conductivity
APCO-GS-CCB-MW-4	11/19/2018 14:43	116.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	11/19/2018 14:43	2.34	mg/L	DO
APCO-GS-CCB-MW-4	11/19/2018 14:43	116.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	11/19/2018 14:43	6.12	pH	pH
APCO-GS-CCB-MW-4	11/19/2018 14:43	19.89	C	Temperature
APCO-GS-CCB-MW-4	11/19/2018 14:43	0.78	NTU	Turbidity
APCO-GS-CCB-MW-4	11/19/2018 14:48	3697.9	uS/cm	Conductivity
APCO-GS-CCB-MW-4	11/19/2018 14:48	116.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	11/19/2018 14:48	2.97	mg/L	DO
APCO-GS-CCB-MW-4	11/19/2018 14:48	119.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	11/19/2018 14:48	6.14	pH	pH
APCO-GS-CCB-MW-4	11/19/2018 14:48	19.86	C	Temperature
APCO-GS-CCB-MW-4	11/19/2018 14:48	0.43	NTU	Turbidity
APCO-GS-CCB-MW-4	11/19/2018 14:53	3673.2	uS/cm	Conductivity
APCO-GS-CCB-MW-4	11/19/2018 14:53	116.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	11/19/2018 14:53	3.23	mg/L	DO
APCO-GS-CCB-MW-4	11/19/2018 14:53	119.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	11/19/2018 14:53	6.15	pH	pH
APCO-GS-CCB-MW-4	11/19/2018 14:53	19.84	C	Temperature
APCO-GS-CCB-MW-4	11/19/2018 14:53	0.61	NTU	Turbidity
APCO-GS-CCB-MW-4	11/19/2018 14:58	3667.6	uS/cm	Conductivity
APCO-GS-CCB-MW-4	11/19/2018 14:58	116.55	ft	Depth to Water Detail

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<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-4	11/19/2018 14:58	3.34	mg/L	DO
APCO-GS-CCB-MW-4	11/19/2018 14:58	118.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	11/19/2018 14:58	6.16	pH	pH
APCO-GS-CCB-MW-4	11/19/2018 14:58	19.84	C	Temperature
APCO-GS-CCB-MW-4	11/19/2018 14:58	0.84	NTU	Turbidity
APCO-GS-CCB-MW-4	11/19/2018 15:03	3660.7	uS/cm	Conductivity
APCO-GS-CCB-MW-4	11/19/2018 15:03	116.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-4	11/19/2018 15:03	3.43	mg/L	DO
APCO-GS-CCB-MW-4	11/19/2018 15:03	118.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-4	11/19/2018 15:03	6.16	pH	pH
APCO-GS-CCB-MW-4	11/19/2018 15:03	19.82	C	Temperature
APCO-GS-CCB-MW-4	11/19/2018 15:03	0.4	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-13	11/19/2018 8:55	3339.3	uS/cm	Conductivity
APCO-GS-CCB-MW-13	11/19/2018 8:55	94.81	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	11/19/2018 8:55	0.66	mg/L	DO
APCO-GS-CCB-MW-13	11/19/2018 8:55	63.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	11/19/2018 8:55	6.33	pH	pH
APCO-GS-CCB-MW-13	11/19/2018 8:55	18.84	C	Temperature
APCO-GS-CCB-MW-13	11/19/2018 8:55	1.86	NTU	Turbidity
APCO-GS-CCB-MW-13	11/19/2018 9:00	3198.2	uS/cm	Conductivity
APCO-GS-CCB-MW-13	11/19/2018 9:00	94.94	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	11/19/2018 9:00	0.4	mg/L	DO
APCO-GS-CCB-MW-13	11/19/2018 9:00	45.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	11/19/2018 9:00	6.36	pH	pH
APCO-GS-CCB-MW-13	11/19/2018 9:00	18.88	C	Temperature
APCO-GS-CCB-MW-13	11/19/2018 9:00	1.17	NTU	Turbidity
APCO-GS-CCB-MW-13	11/19/2018 9:05	3114.3	uS/cm	Conductivity
APCO-GS-CCB-MW-13	11/19/2018 9:05	95.07	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	11/19/2018 9:05	0.33	mg/L	DO
APCO-GS-CCB-MW-13	11/19/2018 9:05	52.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	11/19/2018 9:05	6.37	pH	pH
APCO-GS-CCB-MW-13	11/19/2018 9:05	19.34	C	Temperature
APCO-GS-CCB-MW-13	11/19/2018 9:05	1.1	NTU	Turbidity
APCO-GS-CCB-MW-13	11/19/2018 9:10	3077.6	uS/cm	Conductivity
APCO-GS-CCB-MW-13	11/19/2018 9:10	95.15	ft	Depth to Water Detail
APCO-GS-CCB-MW-13	11/19/2018 9:10	0.32	mg/L	DO
APCO-GS-CCB-MW-13	11/19/2018 9:10	52	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-13	11/19/2018 9:10	6.38	pH	pH
APCO-GS-CCB-MW-13	11/19/2018 9:10	19.22	C	Temperature
APCO-GS-CCB-MW-13	11/19/2018 9:10	1.03	NTU	Turbidity

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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-14	11/19/2018 9:58	3300.3	uS/cm	Conductivity
APCO-GS-CCB-MW-14	11/19/2018 9:58	89.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	11/19/2018 9:58	0.27	mg/L	DO
APCO-GS-CCB-MW-14	11/19/2018 9:58	37.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	11/19/2018 9:58	6.36	pH	pH
APCO-GS-CCB-MW-14	11/19/2018 9:58	19.15	C	Temperature
APCO-GS-CCB-MW-14	11/19/2018 9:58	1.04	NTU	Turbidity
APCO-GS-CCB-MW-14	11/19/2018 10:03	3299.7	uS/cm	Conductivity
APCO-GS-CCB-MW-14	11/19/2018 10:03	89.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	11/19/2018 10:03	0.2	mg/L	DO
APCO-GS-CCB-MW-14	11/19/2018 10:03	37.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	11/19/2018 10:03	6.36	pH	pH
APCO-GS-CCB-MW-14	11/19/2018 10:03	19.1	C	Temperature
APCO-GS-CCB-MW-14	11/19/2018 10:03	1.05	NTU	Turbidity
APCO-GS-CCB-MW-14	11/19/2018 10:08	3299.9	uS/cm	Conductivity
APCO-GS-CCB-MW-14	11/19/2018 10:08	89.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	11/19/2018 10:08	0.17	mg/L	DO
APCO-GS-CCB-MW-14	11/19/2018 10:08	35.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	11/19/2018 10:08	6.35	pH	pH
APCO-GS-CCB-MW-14	11/19/2018 10:08	19.3	C	Temperature
APCO-GS-CCB-MW-14	11/19/2018 10:08	0.9	NTU	Turbidity
APCO-GS-CCB-MW-14	11/19/2018 10:13	3295.3	uS/cm	Conductivity
APCO-GS-CCB-MW-14	11/19/2018 10:13	89.3	ft	Depth to Water Detail
APCO-GS-CCB-MW-14	11/19/2018 10:13	0.16	mg/L	DO
APCO-GS-CCB-MW-14	11/19/2018 10:13	35.7	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-14	11/19/2018 10:13	6.35	pH	pH
APCO-GS-CCB-MW-14	11/19/2018 10:13	19.23	C	Temperature
APCO-GS-CCB-MW-14	11/19/2018 10:13	0.93	NTU	Turbidity



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Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-15	11/19/2018 11:02	2778.6	uS/cm	Conductivity
APCO-GS-CCB-MW-15	11/19/2018 11:02	67.96	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	11/19/2018 11:02	0.39	mg/L	DO
APCO-GS-CCB-MW-15	11/19/2018 11:02	18.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	11/19/2018 11:02	6.11	pH	pH
APCO-GS-CCB-MW-15	11/19/2018 11:02	18.94	C	Temperature
APCO-GS-CCB-MW-15	11/19/2018 11:02	2.82	NTU	Turbidity
APCO-GS-CCB-MW-15	11/19/2018 11:07	2747.2	uS/cm	Conductivity
APCO-GS-CCB-MW-15	11/19/2018 11:07	67.96	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	11/19/2018 11:07	0.26	mg/L	DO
APCO-GS-CCB-MW-15	11/19/2018 11:07	23.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	11/19/2018 11:07	6.09	pH	pH
APCO-GS-CCB-MW-15	11/19/2018 11:07	18.97	C	Temperature
APCO-GS-CCB-MW-15	11/19/2018 11:07	4.93	NTU	Turbidity
APCO-GS-CCB-MW-15	11/19/2018 11:12	2743.3	uS/cm	Conductivity
APCO-GS-CCB-MW-15	11/19/2018 11:12	67.97	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	11/19/2018 11:12	0.29	mg/L	DO
APCO-GS-CCB-MW-15	11/19/2018 11:12	24.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	11/19/2018 11:12	6.08	pH	pH
APCO-GS-CCB-MW-15	11/19/2018 11:12	18.98	C	Temperature
APCO-GS-CCB-MW-15	11/19/2018 11:12	2.28	NTU	Turbidity
APCO-GS-CCB-MW-15	11/19/2018 11:17	2747.5	uS/cm	Conductivity
APCO-GS-CCB-MW-15	11/19/2018 11:17	67.98	ft	Depth to Water Detail
APCO-GS-CCB-MW-15	11/19/2018 11:17	0.24	mg/L	DO
APCO-GS-CCB-MW-15	11/19/2018 11:17	22.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-15	11/19/2018 11:17	6.08	pH	pH
APCO-GS-CCB-MW-15	11/19/2018 11:17	19.02	C	Temperature
APCO-GS-CCB-MW-15	11/19/2018 11:17	1.51	NTU	Turbidity

**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

<b>Well ID</b>	<b>Reading Time</b>	<b>Value</b>	<b>Unit</b>	<b>Description</b>
APCO-GS-CCB-MW-16	11/19/2018 12:02	2682.8	uS/cm	Conductivity
APCO-GS-CCB-MW-16	11/19/2018 12:02	90.45	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	11/19/2018 12:02	0.25	mg/L	DO
APCO-GS-CCB-MW-16	11/19/2018 12:02	-7.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	11/19/2018 12:02	6.5	pH	pH
APCO-GS-CCB-MW-16	11/19/2018 12:02	19.59	C	Temperature
APCO-GS-CCB-MW-16	11/19/2018 12:02	1.47	NTU	Turbidity
APCO-GS-CCB-MW-16	11/19/2018 12:07	2678.6	uS/cm	Conductivity
APCO-GS-CCB-MW-16	11/19/2018 12:07	90.45	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	11/19/2018 12:07	0.19	mg/L	DO
APCO-GS-CCB-MW-16	11/19/2018 12:07	1.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	11/19/2018 12:07	6.47	pH	pH
APCO-GS-CCB-MW-16	11/19/2018 12:07	19.53	C	Temperature
APCO-GS-CCB-MW-16	11/19/2018 12:07	1.05	NTU	Turbidity
APCO-GS-CCB-MW-16	11/19/2018 12:12	2674.7	uS/cm	Conductivity
APCO-GS-CCB-MW-16	11/19/2018 12:12	90.45	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	11/19/2018 12:12	0.18	mg/L	DO
APCO-GS-CCB-MW-16	11/19/2018 12:12	5.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	11/19/2018 12:12	6.45	pH	pH
APCO-GS-CCB-MW-16	11/19/2018 12:12	19.53	C	Temperature
APCO-GS-CCB-MW-16	11/19/2018 12:12	0.9	NTU	Turbidity
APCO-GS-CCB-MW-16	11/19/2018 12:17	2671.8	uS/cm	Conductivity
APCO-GS-CCB-MW-16	11/19/2018 12:17	90.45	ft	Depth to Water Detail
APCO-GS-CCB-MW-16	11/19/2018 12:17	0.16	mg/L	DO
APCO-GS-CCB-MW-16	11/19/2018 12:17	9.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-16	11/19/2018 12:17	6.44	pH	pH
APCO-GS-CCB-MW-16	11/19/2018 12:17	19.55	C	Temperature
APCO-GS-CCB-MW-16	11/19/2018 12:17	0.92	NTU	Turbidity

**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-18	11/19/2018 14:48	3224.5	uS/cm	Conductivity
APCO-GS-CCB-MW-18	11/19/2018 14:48	115.73	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	11/19/2018 14:48	3.91	mg/L	DO
APCO-GS-CCB-MW-18	11/19/2018 14:48	100.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	11/19/2018 14:48	6.58	pH	pH
APCO-GS-CCB-MW-18	11/19/2018 14:48	19.33	C	Temperature
APCO-GS-CCB-MW-18	11/19/2018 14:48	1.53	NTU	Turbidity
APCO-GS-CCB-MW-18	11/19/2018 14:53	3220.1	uS/cm	Conductivity
APCO-GS-CCB-MW-18	11/19/2018 14:53	115.73	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	11/19/2018 14:53	1.69	mg/L	DO
APCO-GS-CCB-MW-18	11/19/2018 14:53	100.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	11/19/2018 14:53	6.55	pH	pH
APCO-GS-CCB-MW-18	11/19/2018 14:53	19.32	C	Temperature
APCO-GS-CCB-MW-18	11/19/2018 14:53	1	NTU	Turbidity
APCO-GS-CCB-MW-18	11/19/2018 14:58	3215.9	uS/cm	Conductivity
APCO-GS-CCB-MW-18	11/19/2018 14:58	115.73	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	11/19/2018 14:58	1.16	mg/L	DO
APCO-GS-CCB-MW-18	11/19/2018 14:58	100	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	11/19/2018 14:58	6.55	pH	pH
APCO-GS-CCB-MW-18	11/19/2018 14:58	19.32	C	Temperature
APCO-GS-CCB-MW-18	11/19/2018 14:58	0.88	NTU	Turbidity
APCO-GS-CCB-MW-18	11/19/2018 15:03	3215.3	uS/cm	Conductivity
APCO-GS-CCB-MW-18	11/19/2018 15:03	115.73	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	11/19/2018 15:03	1.03	mg/L	DO
APCO-GS-CCB-MW-18	11/19/2018 15:03	99.8	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	11/19/2018 15:03	6.55	pH	pH
APCO-GS-CCB-MW-18	11/19/2018 15:03	19.41	C	Temperature
APCO-GS-CCB-MW-18	11/19/2018 15:03	0.84	NTU	Turbidity
APCO-GS-CCB-MW-18	11/19/2018 15:08	3212	uS/cm	Conductivity
APCO-GS-CCB-MW-18	11/19/2018 15:08	115.73	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	11/19/2018 15:08	0.97	mg/L	DO
APCO-GS-CCB-MW-18	11/19/2018 15:08	99.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	11/19/2018 15:08	6.55	pH	pH
APCO-GS-CCB-MW-18	11/19/2018 15:08	19.37	C	Temperature
APCO-GS-CCB-MW-18	11/19/2018 15:08	0.91	NTU	Turbidity
APCO-GS-CCB-MW-18	11/19/2018 15:13	3204.5	uS/cm	Conductivity
APCO-GS-CCB-MW-18	11/19/2018 15:13	115.73	ft	Depth to Water Detail
APCO-GS-CCB-MW-18	11/19/2018 15:13	0.94	mg/L	DO
APCO-GS-CCB-MW-18	11/19/2018 15:13	99.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-18	11/19/2018 15:13	6.54	pH	pH
APCO-GS-CCB-MW-18	11/19/2018 15:13	19.24	C	Temperature
APCO-GS-CCB-MW-18	11/19/2018 15:13	0.87	NTU	Turbidity

**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-19	11/20/2018 11:32	2768.8	uS/cm	Conductivity
APCO-GS-CCB-MW-19	11/20/2018 11:32	81.54	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	11/20/2018 11:32	0.37	mg/L	DO
APCO-GS-CCB-MW-19	11/20/2018 11:32	56	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	11/20/2018 11:32	6.29	pH	pH
APCO-GS-CCB-MW-19	11/20/2018 11:32	18.79	C	Temperature
APCO-GS-CCB-MW-19	11/20/2018 11:32	22.5	NTU	Turbidity
APCO-GS-CCB-MW-19	11/20/2018 11:37	2759.9	uS/cm	Conductivity
APCO-GS-CCB-MW-19	11/20/2018 11:37	81.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	11/20/2018 11:37	0.24	mg/L	DO
APCO-GS-CCB-MW-19	11/20/2018 11:37	54.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	11/20/2018 11:37	6.19	pH	pH
APCO-GS-CCB-MW-19	11/20/2018 11:37	18.9	C	Temperature
APCO-GS-CCB-MW-19	11/20/2018 11:37	13.9	NTU	Turbidity
APCO-GS-CCB-MW-19	11/20/2018 11:42	2752.8	uS/cm	Conductivity
APCO-GS-CCB-MW-19	11/20/2018 11:42	81.57	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	11/20/2018 11:42	0.21	mg/L	DO
APCO-GS-CCB-MW-19	11/20/2018 11:42	51.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	11/20/2018 11:42	6.17	pH	pH
APCO-GS-CCB-MW-19	11/20/2018 11:42	18.79	C	Temperature
APCO-GS-CCB-MW-19	11/20/2018 11:42	7.02	NTU	Turbidity
APCO-GS-CCB-MW-19	11/20/2018 11:47	2747.3	uS/cm	Conductivity
APCO-GS-CCB-MW-19	11/20/2018 11:47	81.58	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	11/20/2018 11:47	0.19	mg/L	DO
APCO-GS-CCB-MW-19	11/20/2018 11:47	50.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	11/20/2018 11:47	6.17	pH	pH
APCO-GS-CCB-MW-19	11/20/2018 11:47	18.83	C	Temperature
APCO-GS-CCB-MW-19	11/20/2018 11:47	5.71	NTU	Turbidity
APCO-GS-CCB-MW-19	11/20/2018 11:52	2744.7	uS/cm	Conductivity
APCO-GS-CCB-MW-19	11/20/2018 11:52	81.58	ft	Depth to Water Detail
APCO-GS-CCB-MW-19	11/20/2018 11:52	0.18	mg/L	DO
APCO-GS-CCB-MW-19	11/20/2018 11:52	49.6	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-19	11/20/2018 11:52	6.16	pH	pH
APCO-GS-CCB-MW-19	11/20/2018 11:52	18.84	C	Temperature
APCO-GS-CCB-MW-19	11/20/2018 11:52	3.69	NTU	Turbidity

**Alabama Power Company  
Plant Gorgas Gypsum Landfill**

Well ID	Reading Time	Value	Unit	Description
APCO-GS-CCB-MW-20	11/20/2018 10:09	2870.2	uS/cm	Conductivity
APCO-GS-CCB-MW-20	11/20/2018 10:09	23.29	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	11/20/2018 10:09	0.13	mg/L	DO
APCO-GS-CCB-MW-20	11/20/2018 10:09	-65.5	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	11/20/2018 10:09	6.83	pH	pH
APCO-GS-CCB-MW-20	11/20/2018 10:09	18.47	C	Temperature
APCO-GS-CCB-MW-20	11/20/2018 10:09	1.07	NTU	Turbidity
APCO-GS-CCB-MW-20	11/20/2018 10:14	2872.8	uS/cm	Conductivity
APCO-GS-CCB-MW-20	11/20/2018 10:14	23.55	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	11/20/2018 10:14	0.11	mg/L	DO
APCO-GS-CCB-MW-20	11/20/2018 10:14	-64.3	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	11/20/2018 10:14	6.82	pH	pH
APCO-GS-CCB-MW-20	11/20/2018 10:14	18.35	C	Temperature
APCO-GS-CCB-MW-20	11/20/2018 10:14	0.79	NTU	Turbidity
APCO-GS-CCB-MW-20	11/20/2018 10:19	2860	uS/cm	Conductivity
APCO-GS-CCB-MW-20	11/20/2018 10:19	23.76	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	11/20/2018 10:19	0.1	mg/L	DO
APCO-GS-CCB-MW-20	11/20/2018 10:19	-62.9	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	11/20/2018 10:19	6.82	pH	pH
APCO-GS-CCB-MW-20	11/20/2018 10:19	18.26	C	Temperature
APCO-GS-CCB-MW-20	11/20/2018 10:19	0.74	NTU	Turbidity
APCO-GS-CCB-MW-20	11/20/2018 10:24	2855.9	uS/cm	Conductivity
APCO-GS-CCB-MW-20	11/20/2018 10:24	23.85	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	11/20/2018 10:24	0.1	mg/L	DO
APCO-GS-CCB-MW-20	11/20/2018 10:24	-62.2	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	11/20/2018 10:24	6.82	pH	pH
APCO-GS-CCB-MW-20	11/20/2018 10:24	18.27	C	Temperature
APCO-GS-CCB-MW-20	11/20/2018 10:24	0.57	NTU	Turbidity
APCO-GS-CCB-MW-20	11/20/2018 10:29	2847.6	uS/cm	Conductivity
APCO-GS-CCB-MW-20	11/20/2018 10:29	23.92	ft	Depth to Water Detail
APCO-GS-CCB-MW-20	11/20/2018 10:29	0.1	mg/L	DO
APCO-GS-CCB-MW-20	11/20/2018 10:29	-62.1	mv	Oxidation Reduction Potention
APCO-GS-CCB-MW-20	11/20/2018 10:29	6.81	pH	pH
APCO-GS-CCB-MW-20	11/20/2018 10:29	18.47	C	Temperature
APCO-GS-CCB-MW-20	11/20/2018 10:29	0.64	NTU	Turbidity

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## ***Field Case Narrative***



## **Plant Gorgas Landfill**

### **ASD 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 present in MW-8 when pumping was initiated. Orange coloration diminished after further pumping.

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.

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# Analytical Report



**Sample Group :** WMWGORLF\_1142  
**Project/Site :** Gorgas Landfill  
Parrish, AL 35580  
**For :** Southern Company Services  
3535 Colonnade Parkway  
Birmingham, AL 35243  
**Attention :** Dustin Brooks & Greg Dyer  
**Released By :** Sarah Copeland  
sgcopela@southernco.com  
(205) 664-6121

The following data has been reviewed and approved by:

Quality Control: Sarah  
Copeland

Digitally signed by Sarah Copeland  
DN: cn=Sarah Copeland, o, ou,  
email=sgcopela@southernco.com,  
ca=US  
Date: 2018.05.04 15:46:37 -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,  
ca=US  
Date: 2018.05.04 15:57:03 -05'00'



Metals ICP

Gorgas Landfill

WMWGORLF\_1142

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY08407	20180412A & 20180413DiI	WMWGORLF_1142
AY08408	20180412A & 20180413DiI	WMWGORLF_1142
AY08409	20180412A & 20180413DiI	WMWGORLF_1142
AY08410	20180412A & 20180413DiI	WMWGORLF_1142
AY08411	20180412A	WMWGORLF_1142
AY08706	20180412A & 20180413DiI	WMWGORLF_1142
AY08707	20180412A & 20180413DiI	WMWGORLF_1142
AY08708	20180412A & 20180413DiI	WMWGORLF_1142
AY08709	20180412A & 20180413DiI	WMWGORLF_1142
AY08710	20180412A & 20180413DiI	WMWGORLF_1142
AY08711	20180412B & 20180413ADiI	WMWGORLF_1142
AY08712	20180412B & 20180413ADiI	WMWGORLF_1142
AY08713	20180412B	WMWGORLF_1142
AY08714	20180412B & 20180413ADiI	WMWGORLF_1142
AY08715	20180412B & 20180413ADiI	WMWGORLF_1142
AY08716	20180412B	WMWGORLF_1142

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 passed.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.





- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- The high standard readbacks associated with EPA 200.7 were within acceptance criteria.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

### Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met, except for the following:

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AY08710
Magnesium	AY08710
Sodium	AY08710

The concentrations of the sample matrix spike/matrix spike duplicate added before digestion is less than 30 percent of the sample concentration, causing inaccurate spike recovery information. The laboratory control sample indicates that the digestion and analysis were in control.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.

7. All samples were analyzed at a x2.03 dilution to compensate for potential matrix effects. The following samples were diluted due to analyzed sample concentration over the high standard of the calibration curve.

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AY08407	Calcium	x10.15
AY08407	Magnesium	x10.15
AY08407	Sodium	x10.15
AY08408	Calcium	x10.15
AY08408	Magnesium	x10.15
AY08408	Sodium	x10.15
AY08409	Calcium	x10.15
AY08409	Magnesium	x10.15
AY08409	Sodium	x10.15

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## Case Narrative



AY08410	Calcium	x10.15
AY08410	Magnesium	x10.15
AY08410	Sodium	x10.15
AY08706	Calcium	x10.15
AY08706	Magnesium	x10.15
AY08706	Sodium	x10.15
AY08707	Calcium	x10.15
AY08707	Magnesium	x10.15
AY08707	Sodium	x10.15
AY08708	Calcium	x10.15
AY08708	Magnesium	x10.15
AY08708	Sodium	x10.15
AY08709	Calcium	x101.5
AY08709	Magnesium	x10.15
AY08709	Sodium	x10.15
AY08710	Calcium	x10.15
AY08710	Magnesium	x10.15
AY08710	Sodium	x10.15
AY08710MS	Calcium	x101.5
AY08710MS	Magnesium	x10.15
AY08710MS	Sodium	x10.15
AY08710MSD	Calcium	x101.5
AY08710MSD	Magnesium	x10.15
AY08710MSD	Sodium	x10.15
AY08711	Calcium	x10.15
AY08711	Sodium	x10.15
AY08711	Magnesium	x101.5
AY08712	Calcium	x10.15
AY08712	Magnesium	x10.15
AY08714	Calcium	x10.15
AY08714	Magnesium	x10.15
AY08715	Calcium	x10.15
AY08715	Magnesium	x10.15

8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF\_1142

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AY08407	617374	WMWGORLF_1142
AY08408	617374	WMWGORLF_1142
AY08409	617374	WMWGORLF_1142
AY08410	617374	WMWGORLF_1142
AY08411	617374	WMWGORLF_1142
AY08706	617297	WMWGORLF_1142
AY08707	617297	WMWGORLF_1142
AY08708	617297	WMWGORLF_1142
AY08709	617297	WMWGORLF_1142
AY08710	617297	WMWGORLF_1142
AY08711	617297	WMWGORLF_1142
AY08712	617297	WMWGORLF_1142
AY08713	617297	WMWGORLF_1142
AY08714	617297	WMWGORLF_1142
AY08715	617297	WMWGORLF_1142
AY08716	617298	WMWGORLF_1142

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

#### General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.



- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.

#### Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. All samples were analyzed at a dilution of 1 to 5 to compensate for any matrix effects.
  8. The raw data results are shown with dilution factors included.

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# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY08407

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	139	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	72.0	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	80.8	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	5.68	mg/L
<b>General Characteristics</b>									
pH	HRG	4/12/2018	SM 4500H+ B		1	0.01		6.46	SU
Alkalinity, Total as CaCO3	HRG	4/12/2018	SM 2320 B		1	0.1		153	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			0.041	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			152.957	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY08407

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08411	Potassium, Total	mg/L	-0.000414	0.0946	10.0	10.7	11.1	10.3	8.5 to 11.5	107	70 to 130	3.15	20
AY08707	Alkalinity, Total as CaCO <sub>3</sub>	mg/L CaCO <sub>3</sub>					312.66	49.8	45.0 to 55.0			3.46	10
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08707	pH	SU						6.99	6.95 to 7.05				
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
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 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY08407

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Rec	Prec	Prec	Limit
								Duplicate	LCS			Limit	Rec	Limit	Prec	Limit

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

CC:

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 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY08408

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	377	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	183	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	131	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	7.08	mg/L
<b>General Characteristics</b>									
pH	HRG	4/12/2018	SM 4500H+ B		1	0.01		6.67	SU
Alkalinity, Total as CaCO3	HRG	4/12/2018	SM 2320 B		1	0.1		282	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			0.124	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			281.874	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**



Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY08408

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08707	Alkalinity, Total as CaCO3	mg/L CaCO3					312.66	49.8	45.0 to 55.0			3.46	10
AY08411	Potassium, Total	mg/L	-0.000414	0.0946	10.0	10.7	11.1	10.3	8.5 to 11.5	107	70 to 130	3.15	20
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08707	pH	SU						6.99	6.95 to 7.05				
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY08408

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
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 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY08409

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	333	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	319	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	48.9	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	20.5	mg/L
<b>General Characteristics</b>									
pH	HRG	4/12/2018	SM 4500H+ B		1	0.01		5.94	SU
Alkalinity, Total as CaCO3	HRG	4/12/2018	SM 2320 B		1	0.1		231	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			0.019	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			230.981	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

Alabama Power General Test Laboratory  
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 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY08409

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08411	Potassium, Total	mg/L	-0.000414	0.0946	10.0	10.7	11.1	10.3	8.5 to 11.5	107	70 to 130	3.15	20
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08707	Alkalinity, Total as CaCO <sub>3</sub>	mg/L					312.66	49.8	45.0 to 55.0			3.46	10
AY08707	pH	SU						6.99	6.95 to 7.05				
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY08409

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS		Rec		Prec	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

CC:

Alabama Power General Test Laboratory  
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# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-12 Dup

Laboratory ID Number: AY08410

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	347	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	332	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	50.1	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	20.6	mg/L
<b>General Characteristics</b>									
pH	HRG	4/12/2018	SM 4500H+ B		1	0.01		5.96	SU
Alkalinity, Total as CaCO3	HRG	4/12/2018	SM 2320 B		1	0.1		230	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			0.020	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			229.980	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

Alabama Power General Test Laboratory  
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 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-12 Dup

Laboratory ID Number: AY08410

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08411	Potassium, Total	mg/L	-0.000414	0.0946	10.0	10.7	11.1	10.3	8.5 to 11.5	107	70 to 130	3.15	20
AY08707	Alkalinity, Total as CaCO <sub>3</sub>	mg/L CaCO <sub>3</sub>					312.66	49.8	45.0 to 55.0			3.46	10
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08707	pH	SU						6.99	6.95 to 7.05				
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill - MW-12 Dup

Laboratory ID Number: AY08410

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Rec	Prec	Prec	Limit
								Duplicate	LCS			Limit	Rec	Limit	Prec	Limit

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

CC:



Alabama Power General Test Laboratory  
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 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY08411

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Magnesium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Sodium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	U Not Detected	mg/L
<b>General Characteristics</b>									
pH	HRG	4/12/2018	SM 4500H+ B		1	0.01		5.41	SU
Alkalinity, Total as CaCO3	HRG	4/12/2018	SM 2320 B		1	0.1		0.4	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			0.000	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			0.400	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY08411

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08411	Potassium, Total	mg/L	-0.000414	0.0946	10.0	10.7	11.1	10.3	8.5 to 11.5	107	70 to 130	3.15	20
AY08707	Alkalinity, Total as CaCO3	mg/L					312.66	49.8	45.0 to 55.0			3.46	10
AY08707	pH	SU						6.99	6.95 to 7.05				
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 06-Apr-18  
 Customer ID:  
 Delivery Date: 06-Apr-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY08411

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

CC:

Alabama Power General Test Laboratory  
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 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY08706

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	323	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	288	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	45.3	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	8.28	mg/L
<b>General Characteristics</b>									
pH	HRG	4/12/2018	SM 4500H+ B		1	0.01		6.74	SU
Alkalinity, Total as CaCO3	HRG	4/12/2018	SM 2320 B		1	0.1		294	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			0.152	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			293.846	mg/l-CaCO3

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY08706

Sample	Analysis	Units	MB				LCS			Rec		Prec	
			MB	Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08707	Alkalinity, Total as CaCO <sub>3</sub>	mg/L CaCO <sub>3</sub>					312.66	49.8	45.0 to 55.0			3.46	10
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20
AY08707	pH	SU						6.99	6.95 to 7.05				
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY08706

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

CC:

Alabama Power General Test Laboratory  
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 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY08707

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	306	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	240	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	42.1	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	6.13	mg/L
<b>General Characteristics</b>									
pH	HRG	4/12/2018	SM 4500H+ B		1	0.01		6.80	SU
Alkalinity, Total as CaCO3	HRG	4/12/2018	SM 2320 B		1	0.1		302	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			0.179	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	HRG	4/12/2018	SM 4500CO2 D		1			301.818	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY08707

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08707	Alkalinity, Total as CaCO <sub>3</sub>	mg/L CaCO <sub>3</sub>					312.66	49.8	45.0 to 55.0			3.46	10
AY08707	pH	SU						6.99	6.95 to 7.05				
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:



Alabama Power General Test Laboratory  
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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY08707

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Rec	Prec	Prec	Limit

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:**

CC:

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
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 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-7 Dup

Laboratory ID Number: AY08708

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	300	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	235	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	40.4	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	6.14	mg/L
<b>General Characteristics</b>									
pH	DLJ	4/23/2018	SM 4500H+ B		1	0.01		6.92	SU
Alkalinity, Total as CaCO3	DLJ	4/23/2018	SM 2320 B		1	0.1		297	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0.232	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			296.764	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-7 Dup

Laboratory ID Number: AY08708

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20
AY08715	Alkalinity, Total as CaCO3	mg/L					26.8	50.8	45.0 to 55.0			0.374	10
AY08715	pH	SU						6.97	6.95 to 7.05				

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-7 Dup

Laboratory ID Number: AY08708

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY08709

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		101.5	10.15	50.75	453	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	273	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	64.6	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	6.37	mg/L
<b>General Characteristics</b>									
pH	DLJ	4/23/2018	SM 4500H+ B		1	0.01		6.43	SU
Alkalinity, Total as CaCO3	DLJ	4/23/2018	SM 2320 B		1	0.1		124	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0.031	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			123.967	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY08709

Sample	Analysis	Units	MB				LCS			Rec		Prec	
			MB	Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20
AY08715	Alkalinity, Total as CaCO3	mg/L CaCO3					26.8	50.8	45.0 to 55.0			0.374	10
AY08715	pH	SU						6.97	6.95 to 7.05				

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY08709

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS					

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY08710

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	405	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	363	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	50.6	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	5.59	mg/L
<b>General Characteristics</b>									
pH	DLJ	4/23/2018	SM 4500H+ B		1	0.01		6.61	SU
Alkalinity, Total as CaCO3	DLJ	4/23/2018	SM 2320 B		1	0.1		235	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0.090	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			234.908	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Sample was left out of the refrigerator for at least 72+ hours during alkalinity analysis. SGC 5/3/18  
 Recoveries for Ca, Mg and Na are out of spec, the spike amounts less than 30% of the sample amounts. SGC 5/4/18



Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY08710

Sample	Analysis	Units	MB				LCS			Rec		Prec	
			MB	Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08710	Calcium, Total	mg/L	-0.0200	0.22	5.0	416	391	4.84	4.25 to 5.75	220	70 to 130	6.20	20
AY08710	Sodium, Total	mg/L	0.00576	0.22	5.00	58.1	57.1	5.02	4.25 to 5.75	150	70 to 130	1.74	20
AY08710	Magnesium, Total	mg/L	-0.000934	0.22	5.00	380	377	4.89	4.25 to 5.75	340	70 to 130	0.793	20
AY08715	Alkalinity, Total as CaCO3	mg/L CaCO3					26.8	50.8	45.0 to 55.0			0.374	10
AY08715	pH	SU						6.97	6.95 to 7.05				
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Sample was left out of the refrigerator for at least 72+ hours during alkalinity analysis. SGC 5/3/18  
 Recoveries for Ca, Mg and Na are out of spec, the spike amounts less than 30% of the sample amounts. SGC 5/4/18

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY08710

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
--------	----------	-------	----	-------	-------	-----	--------	-----	-----	-------	-----	-------	------	-------

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Sample was left out of the refrigerator for at least 72+ hours during alkalinity analysis. SGC 5/3/18  
 Recoveries for Ca, Mg and Na are out of spec, the spike amounts less than 30% of the sample amounts. SGC 5/4/18

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY08711

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	295	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		101.5	10.15	50.75	435	mg/L
* Sodium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	38.2	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	8.54	mg/L
<b>General Characteristics</b>									
pH	DLJ	4/23/2018	SM 4500H+ B		1	0.01		6.52	SU
Alkalinity, Total as CaCO3	DLJ	4/23/2018	SM 2320 B		1	0.1		169	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0.053	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			168.946	mg/l-CaCO3

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY08711

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Prec Limit	
			Limit	Spike					Rec	Limit			
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20
AY08716	Calcium, Total	mg/L	-0.0170	0.22	5.00	4.84	4.71	4.69	4.25 to 5.75	96.8	70 to 130	2.69	20
AY08716	Magnesium, Total	mg/L	0.00123	0.22	5.00	4.96	4.83	4.73	4.25 to 5.75	99.2	70 to 130	2.70	20
AY08716	Sodium, Total	mg/L	0.00535	0.22	5.00	5.03	4.95	4.92	4.25 to 5.75	101	70 to 130	1.60	20
AY08715	Alkalinity, Total as CaCO3	mg/L CaCO3					26.8	50.8	45.0 to 55.0			0.374	10
AY08715	pH	SU					6.97	6.97	6.95 to 7.05				

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY08711

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS					

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY08712

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	252	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	388	mg/L
* Sodium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	37.2	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	7.04	mg/L
<b>General Characteristics</b>									
pH	DLJ	4/23/2018	SM 4500H+ B		1	0.01		5.82	SU
Alkalinity, Total as CaCO3	DLJ	4/23/2018	SM 2320 B		1	0.1		62.7	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0.004	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			62.696	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY08712

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20
AY08715	Alkalinity, Total as CaCO3	mg/L CaCO3					26.8	50.8	45.0 to 55.0			0.374	10
AY08715	pH	SU					6.97		6.95 to 7.05				
AY08716	Calcium, Total	mg/L	-0.0170	0.22	5.00	4.84	4.71	4.69	4.25 to 5.75	96.8	70 to 130	2.69	20
AY08716	Magnesium, Total	mg/L	0.00123	0.22	5.00	4.96	4.83	4.73	4.25 to 5.75	99.2	70 to 130	2.70	20
AY08716	Sodium, Total	mg/L	0.00535	0.22	5.00	5.03	4.95	4.92	4.25 to 5.75	101	70 to 130	1.60	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY08712

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

CC:



Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY08713

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Magnesium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Sodium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	U Not Detected	mg/L
<b>General Characteristics</b>									
pH	DLJ	4/23/2018	SM 4500H+ B		1	0.01		5.51	SU
Alkalinity, Total as CaCO3	DLJ	4/23/2018	SM 2320 B		1	0.1		0.1	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0.000	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0.100	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY08713

Sample	Analysis	Units	MB				LCS			Rec		Prec	
			MB	Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20
AY08716	Calcium, Total	mg/L	-0.0170	0.22	5.00	4.84	4.71	4.69	4.25 to 5.75	96.8	70 to 130	2.69	20
AY08716	Magnesium, Total	mg/L	0.00123	0.22	5.00	4.96	4.83	4.73	4.25 to 5.75	99.2	70 to 130	2.70	20
AY08716	Sodium, Total	mg/L	0.00535	0.22	5.00	5.03	4.95	4.92	4.25 to 5.75	101	70 to 130	1.60	20
AY08715	Alkalinity, Total as CaCO3	mg/L CaCO3					26.8	50.8	45.0 to 55.0			0.374	10
AY08715	pH	SU					6.97	6.97	6.95 to 7.05				

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 09-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY08713

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS						

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 10-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY08714

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	153	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	172	mg/L
* Sodium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	21.9	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	5.93	mg/L
<b>General Characteristics</b>									
pH	DLJ	4/23/2018	SM 4500H+ B		1	0.01		6.31	SU
Alkalinity, Total as CaCO3	DLJ	4/23/2018	SM 2320 B		1	0.1		246	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0.047	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			245.952	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 10-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY08714

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20
AY08716	Calcium, Total	mg/L	-0.0170	0.22	5.00	4.84	4.71	4.69	4.25 to 5.75	96.8	70 to 130	2.69	20
AY08716	Magnesium, Total	mg/L	0.00123	0.22	5.00	4.96	4.83	4.73	4.25 to 5.75	99.2	70 to 130	2.70	20
AY08716	Sodium, Total	mg/L	0.00535	0.22	5.00	5.03	4.95	4.92	4.25 to 5.75	101	70 to 130	1.60	20
AY08715	Alkalinity, Total as CaCO3	mg/L CaCO3					26.8	50.8	45.0 to 55.0			0.374	10
AY08715	pH	SU					6.97	6.97	6.95 to 7.05				

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

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 (205) 664-6032 or 6171  
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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 10-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY08714

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 10-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY08715

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	154	mg/L
* Magnesium, Total	HRG	4/13/2018	EPA 200.7		10.15	1.015	5.075	284	mg/L
* Sodium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	35.8	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	7.31	mg/L
<b>General Characteristics</b>									
pH	DLJ	4/23/2018	SM 4500H+ B		1	0.01		5.54	SU
Alkalinity, Total as CaCO3	DLJ	4/23/2018	SM 2320 B		1	0.1		26.7	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0.001	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			26.699	mg/l-CaCO3

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 10-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY08715

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08715	Potassium, Total	mg/L	0.00636	0.0946	10.0	17.7	17.9	10.3	8.5 to 11.5	104	70 to 130	1.00	20
AY08716	Calcium, Total	mg/L	-0.0170	0.22	5.00	4.84	4.71	4.69	4.25 to 5.75	96.8	70 to 130	2.69	20
AY08716	Magnesium, Total	mg/L	0.00123	0.22	5.00	4.96	4.83	4.73	4.25 to 5.75	99.2	70 to 130	2.70	20
AY08716	Sodium, Total	mg/L	0.00535	0.22	5.00	5.03	4.95	4.92	4.25 to 5.75	101	70 to 130	1.60	20
AY08715	Alkalinity, Total as CaCO3	mg/L CaCO3					26.8	50.8	45.0 to 55.0			0.374	10
AY08715	pH	SU					6.97	6.97	6.95 to 7.05				

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18



Alabama Power General Test Laboratory  
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 Calera, AL 35040  
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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 10-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY08715

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Limit	Prec	Limit
							Duplicate	LCS					

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

CC:

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis Alabama Power



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 10-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY08716

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Calcium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Magnesium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Sodium, Total	HRG	4/12/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Potassium, Total	DLJ	4/12/2018	EPA 200.8		5.075	0.215	2.5	U Not Detected	mg/L
<b>General Characteristics</b>									
pH	DLJ	4/23/2018	SM 4500H+ B		1	0.01		5.52	SU
Alkalinity, Total as CaCO3	DLJ	4/23/2018	SM 2320 B		1	0.1		U Not Detected	mg/L CaCO3
Carbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0	mg/l-CaCO3
Bicarbonate Alkalinity, as CaCO3	DLJ	4/23/2018	SM 4500CO2 D		1			0	mg/l-CaCO3

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

## Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 10-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY08716

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY08716	Potassium, Total	mg/L	0.00636	0.0946	10.0	10.6	10.4	10.3	8.5 to 11.5	106	70 to 130	2.16	20
AY08715	Alkalinity, Total as CaCO3	mg/L CaCO3					26.8	50.8	45.0 to 55.0			0.374	10
AY08715	pH	SU						6.97	6.95 to 7.05				
AY08716	Calcium, Total	mg/L	-0.0170	0.22	5.00	4.84	4.71	4.69	4.25 to 5.75	96.8	70 to 130	2.69	20
AY08716	Magnesium, Total	mg/L	0.00123	0.22	5.00	4.96	4.83	4.73	4.25 to 5.75	99.2	70 to 130	2.70	20
AY08716	Sodium, Total	mg/L	0.00535	0.22	5.00	5.03	4.95	4.92	4.25 to 5.75	101	70 to 130	1.60	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 10-Apr-18  
 Customer ID:  
 Delivery Date: 11-Apr-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY08716

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample	LCS	Limit	Rec	Prec
							Duplicate	LCS		Limit	Prec

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

**Comments:** Sample was left out of the refrigerator for at least 72+ hours. SGC 5/3/18

CC:

## Definitions



Abbreviation	Description
DF	Dilution Factor
LCS	Lab Control Sample
LFM	Lab Fortified Matrix
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spec	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
E	Estimated reported value exceeded calibration range.
J	Reported value is an estimate because concentration is less than reporting limit.
N	Organic constituents tentatively identified. Confirmation is needed.
R	Matrix spike recovery is out of range.
U	Compound was analyzed, but not detected.
P	Precision is out of range.
C	Analyte was verified by re-analysis.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
L	Check standard is outside of the required specification limit.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
F	Water Field Group (WFG) qualifier; see comments for more information





# Chain of Custody

## Groundwater

APC General Testing Laboratory  
General Service Complex Building 8

Field Complete  Outside Lab  
 Lab Complete

Lab ETA 04/10/2018 16:00

Requested Complete Date	<input type="text" value="Routine"/>	Results To	<input type="text" value="Dustin Brooks, Greg Dyer"/>
Site Representative	<input type="text" value="Che George"/>	Requested By	<input type="text" value="Greg Dyer"/>
Collector	<input type="text" value="Nick Pitts"/>	Location	<input type="text" value="Gorgas Landfill"/>
Analysis Requested	<input type="text" value="Bottle 1 (500ml): Metals, Bottle 2 (250ml): Alkalinity, pH"/>		
Comments	<input type="text"/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-8	04/09/2018	09:21	2	Groundwater		AY08706
MW-7	04/09/2018	10:20	2	Groundwater		AY08707
MW-7 Dup	04/09/2018	10:20	2	Sample Duplicate		AY08708
MW-6	04/09/2018	11:34	2	Groundwater		AY08709
MW-5	04/09/2018	12:52	2	Groundwater		AY08710
MW-4	04/09/2018	14:00	2	Groundwater		AY08711
MW-3	04/09/2018	15:55	2	Groundwater		AY08712
FB-2	04/09/2018	15:30	2	Field Blank		AY08713
MW-2	04/10/2018	09:30	2	Groundwater		AY08714
MW-1	04/10/2018	10:45	2	Groundwater		AY08715
EB-1	04/10/2018	11:45	2	Equipment Blank		AY08716

Relinquished By	Received By	Date/Time
	Sarah Copeland <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o.ou, email=sgcopela@southerncco.com, c=US Date: 2018.04.10 15:51:24 -05'00'</small>	04/10/2018 15:51

SmarTroll ID	<input type="text" value="4696-23443-3-2"/>	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	<input type="text" value="5160-26211-1-1"/>	Cooler Temp
		<input type="text" value="0.3 degrees C"/>
		Thermometer ID
		<input type="text" value="5408-27568-2-2"/>
		pH Strip ID
		<input type="text" value="5881-30156-10-10"/>



# Chain of Custody

## Groundwater

APC General Testing Laboratory  
General Service Complex Building 8

Field Complete  Outside Lab  
 Lab Complete

Lab ETA 04/06/2018 16:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Nick Pitts	Location	Gorgas Landfill
Analysis Requested	Bottle 1 (500ml): Boron-11, Bottle 2 (3, 40ml): 8260, Bottle 3 (250ml): Tritium, Bottle 4 (250ml): Anions		
Comments	All samples outsourced to Test America. There is no requirement to check preservation for the analyses requested. Two of the three 8260 vials were broken prior to shipping for MW-10.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-10	04/06/2018	12:40	4	Groundwater		AY08412
MW-11	04/06/2018	09:52	3	Groundwater		AY08413
MW-12	04/06/2018	11:00	4	Groundwater		AY08414
MW-12 Dup	04/06/2018	11:00	4	Sample Duplicate		AY08415
FB-1	04/06/2018	13:10	4	Field Blank		AY08416

Relinquished By	Received By	Date/Time
	<b>Sarah Copeland</b> <small>Digitally signed by Sarah Copeland            DN: cn=Sarah Copeland, o.ou,            email=sgcopela@southernmco.com, c=US            Date: 2018.04.06 16:08:01 -05'00'</small>	<span style="border: 1px solid black; padding: 2px;">04/06/2018 16:08</span>

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input type="checkbox"/>
Turbidity ID	5160-26211-1-1	Cooler Temp
		0.2 degrees C
		Thermometer ID
		5408-27568-2-2
		pH Strip ID
		NA





**Chain of Custody**  
**Groundwater**  
 APC General Testing Laboratory  
 General Service Complex Building 8

Field Complete  Outside Lab  
 Lab Complete

Lab ETA 04/10/2018 16:00

Requested Complete Date	<input type="text" value="Routine"/>	Results To	<input type="text" value="Dustin Brooks, Greg Dyer"/>
Site Representative	<input type="text" value="Che George"/>	Requested By	<input type="text" value="Greg Dyer"/>
Collector	<input type="text" value="Nick Pitts"/>	Location	<input type="text" value="Gorgas Landfill"/>
Analysis Requested	<input type="text" value="Bottle 1 (250ml): Anions"/>		
Comments	<input type="text" value="EB-1 also analyzed for 8260, Tritium &amp; Boron-11&lt;br/&gt;All samples outsourced to Test America. There is no pH preservation requirement."/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-8	04/09/2018	09:21	1	Groundwater		AY08717
MW-7	04/09/2018	10:20	1	Groundwater		AY08718
MW-7 Dup	04/09/2018	10:20	1	Sample Duplicate		AY08719
MW-6	04/09/2018	11:34	1	Groundwater		AY08720
MW-5	04/09/2018	12:52	1	Groundwater		AY08721
MW-4	04/09/2018	14:00	1	Groundwater		AY08722
MW-3	04/09/2018	15:55	1	Groundwater		AY08723
FB-2	04/09/2018	15:30	1	Field Blank		AY08724
MW-2	04/10/2018	09:30	1	Groundwater		AY08725
MW-1	04/10/2018	10:45	1	Groundwater		AY08726
EB-1	04/10/2018	11:45	4	Equipment Blank		AY08727

Relinquished By	Received By	Date/Time
	Sarah Copeland <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o.ou, email=sgcopella@southerncco.com, c=US Date: 2018.04.10 15:55:38 -05'00'</small>	04/10/2018 15:55

SmarTroll ID	<input type="text" value="4696-23443-3-2"/>	All metals and radiological bottles have pH < 2 <input type="checkbox"/>
Turbidity ID	<input type="text" value="5160-26211-1-1"/>	Cooler Temp
		<input type="text" value="0.3 degrees C"/>
		Thermometer ID
		<input type="text" value="5408-27568-2-2"/>
		pH Strip ID
		<input type="text" value="NA"/>

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-151978-1

TestAmerica SDG: Gorgas Landfill 1142 (ASD)

Client Project/Site: CCR Plant Gorgas

For:

Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

5/13/2018 7:39:30 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

**Job ID: 400-151978-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-151978-1

#### General Chemistry

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AY08412 MW-10 (400-151978-1), AY08413 MW-11 (400-151978-2), AY08414 MW-12 (400-151978-3), AY08415 MW-12 DUP (400-151978-4), (400-152010-H-2), (400-152010-H-2 MS), (400-152010-H-2 MSD), AY08717 MW-8 (400-151978-6), AY08718 MW-7 (400-151978-7), AY08719 MW-7 DUP (400-151978-8), AY08720 MW-6 (400-151978-9), AY08721 MW-5 (400-151978-10), AY08722 MW-4 (400-151978-11), AY08723 MW-3 (400-151978-12), AY08725 MW-2 (400-151978-14) and AY08726 MW-1 (400-151978-15). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AY08717 MW-8 (400-151978-6). Elevated reporting limits (RLs) are provided.



# Detection Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

## Client Sample ID: AY08412 MW-10

## Lab Sample ID: 400-151978-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.6		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	610		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08413 MW-11

## Lab Sample ID: 400-151978-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1500		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08414 MW-12

## Lab Sample ID: 400-151978-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.4		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	2000		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08415 MW-12 DUP

## Lab Sample ID: 400-151978-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.4		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1900		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08416 FB-1

## Lab Sample ID: 400-151978-5

No Detections.

## Client Sample ID: AY08717 MW-8

## Lab Sample ID: 400-151978-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	74		4.0	1.2	mg/L	2		SM 4500 Cl- E	Total/NA
Sulfate	1500		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08718 MW-7

## Lab Sample ID: 400-151978-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	30		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08719 MW-7 DUP

## Lab Sample ID: 400-151978-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	30		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08720 MW-6

## Lab Sample ID: 400-151978-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.7		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1900		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08721 MW-5

## Lab Sample ID: 400-151978-10

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

## Client Sample ID: AY08721 MW-5 (Continued)

## Lab Sample ID: 400-151978-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	2000		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08722 MW-4

## Lab Sample ID: 400-151978-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	2300		400	110	mg/L	80		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08723 MW-3

## Lab Sample ID: 400-151978-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8	J	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1900		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08724 FB-2

## Lab Sample ID: 400-151978-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2.9	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08725 MW-2

## Lab Sample ID: 400-151978-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.7		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	770		200	56	mg/L	40		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08726 MW-1

## Lab Sample ID: 400-151978-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.8		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1400		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

## Client Sample ID: AY08727 EB-1

## Lab Sample ID: 400-151978-16

No Detections.

# Method Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
906.0	Tritium, Total (LSC)	EPA	TAL SL
5030C	Purge and Trap	SW846	TAL PEN
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

#### Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151978-1	AY08412 MW-10	Water	04/06/18 12:40	04/10/18 09:24
400-151978-2	AY08413 MW-11	Water	04/06/18 09:52	04/10/18 09:24
400-151978-3	AY08414 MW-12	Water	04/06/18 11:00	04/10/18 09:24
400-151978-4	AY08415 MW-12 DUP	Water	04/06/18 11:00	04/10/18 09:24
400-151978-5	AY08416 FB-1	Water	04/06/18 13:10	04/10/18 09:24
400-151978-6	AY08717 MW-8	Water	04/09/18 09:21	04/12/18 09:32
400-151978-7	AY08718 MW-7	Water	04/09/18 10:20	04/12/18 09:32
400-151978-8	AY08719 MW-7 DUP	Water	04/09/18 10:20	04/12/18 09:32
400-151978-9	AY08720 MW-6	Water	04/09/18 11:34	04/12/18 09:32
400-151978-10	AY08721 MW-5	Water	04/09/18 12:52	04/12/18 09:32
400-151978-11	AY08722 MW-4	Water	04/09/18 14:00	04/12/18 09:32
400-151978-12	AY08723 MW-3	Water	04/09/18 15:55	04/12/18 09:32
400-151978-13	AY08724 FB-2	Water	04/09/18 15:30	04/12/18 09:32
400-151978-14	AY08725 MW-2	Water	04/10/18 09:30	04/12/80 09:32
400-151978-15	AY08726 MW-1	Water	04/10/18 10:45	04/12/18 09:32
400-151978-16	AY08727 EB-1	Water	04/10/18 11:45	04/12/18 09:32



# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

**Client Sample ID: AY08412 MW-10**

**Lab Sample ID: 400-151978-1**

**Date Collected: 04/06/18 12:40**

**Matrix: Water**

**Date Received: 04/10/18 09:24**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	<0.52		1.0	0.52	ug/L			04/15/18 16:49	1
Dichlorodifluoromethane	<0.85		1.0	0.85	ug/L			04/15/18 16:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		1.0	0.50	ug/L			04/15/18 16:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		78 - 118					04/15/18 16:49	1
Dibromofluoromethane	96		81 - 121					04/15/18 16:49	1
Toluene-d8 (Surr)	93		80 - 120					04/15/18 16:49	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.6		2.0	0.60	mg/L			04/19/18 09:58	1
Sulfate	610		100	28	mg/L			04/23/18 10:00	20

**Method: 906.0 - Tritium, Total (LSC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-31.5	U	181	181	500	327	pCi/L	04/25/18 16:04	04/25/18 22:28	1

**Client Sample ID: AY08413 MW-11**

**Lab Sample ID: 400-151978-2**

**Date Collected: 04/06/18 09:52**

**Matrix: Water**

**Date Received: 04/10/18 09:24**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	<0.52		1.0	0.52	ug/L			04/15/18 17:15	1
Dichlorodifluoromethane	<0.85		1.0	0.85	ug/L			04/15/18 17:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		1.0	0.50	ug/L			04/15/18 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	86		78 - 118					04/15/18 17:15	1
Dibromofluoromethane	96		81 - 121					04/15/18 17:15	1
Toluene-d8 (Surr)	93		80 - 120					04/15/18 17:15	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16		2.0	0.60	mg/L			04/19/18 10:01	1
Sulfate	1500		300	84	mg/L			04/23/18 10:00	60

**Method: 906.0 - Tritium, Total (LSC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-152	U	165	166	500	315	pCi/L	04/25/18 16:04	04/25/18 23:10	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

**Client Sample ID: AY08414 MW-12**

**Lab Sample ID: 400-151978-3**

**Date Collected: 04/06/18 11:00**

**Matrix: Water**

**Date Received: 04/10/18 09:24**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	<0.52		1.0	0.52	ug/L			04/15/18 17:40	1
Dichlorodifluoromethane	<0.85		1.0	0.85	ug/L			04/15/18 17:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		1.0	0.50	ug/L			04/15/18 17:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	87		78 - 118					04/15/18 17:40	1
Dibromofluoromethane	98		81 - 121					04/15/18 17:40	1
Toluene-d8 (Surr)	90		80 - 120					04/15/18 17:40	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.4		2.0	0.60	mg/L			04/19/18 10:01	1
Sulfate	2000		300	84	mg/L			04/23/18 10:00	60

**Method: 906.0 - Tritium, Total (LSC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-211	U	161	162	500	318	pCi/L	04/25/18 16:04	04/25/18 23:52	1

**Client Sample ID: AY08415 MW-12 DUP**

**Lab Sample ID: 400-151978-4**

**Date Collected: 04/06/18 11:00**

**Matrix: Water**

**Date Received: 04/10/18 09:24**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	<0.52		1.0	0.52	ug/L			04/15/18 18:06	1
Dichlorodifluoromethane	<0.85		1.0	0.85	ug/L			04/15/18 18:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		1.0	0.50	ug/L			04/15/18 18:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	86		78 - 118					04/15/18 18:06	1
Dibromofluoromethane	98		81 - 121					04/15/18 18:06	1
Toluene-d8 (Surr)	91		80 - 120					04/15/18 18:06	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.4		2.0	0.60	mg/L			04/19/18 10:01	1
Sulfate	1900		300	84	mg/L			04/23/18 10:00	60

**Method: 906.0 - Tritium, Total (LSC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-45.0	U	175	175	500	315	pCi/L	04/25/18 16:04	04/26/18 00:12	1

# Client Sample Results

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

**Client Sample ID: AY08416 FB-1**

**Lab Sample ID: 400-151978-5**

**Date Collected: 04/06/18 13:10**

**Matrix: Water**

**Date Received: 04/10/18 09:24**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	<0.52		1.0	0.52	ug/L			04/15/18 13:50	1
Dichlorodifluoromethane	<0.85		1.0	0.85	ug/L			04/15/18 13:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		1.0	0.50	ug/L			04/15/18 13:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	86		78 - 118					04/15/18 13:50	1
Dibromofluoromethane	99		81 - 121					04/15/18 13:50	1
Toluene-d8 (Surr)	92		80 - 120					04/15/18 13:50	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			04/19/18 10:01	1
Sulfate	<1.4		5.0	1.4	mg/L			04/23/18 10:00	1

**Method: 906.0 - Tritium, Total (LSC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-195	U	161	162	500	316	pCi/L	04/25/18 16:04	04/26/18 00:33	1

**Client Sample ID: AY08717 MW-8**

**Lab Sample ID: 400-151978-6**

**Date Collected: 04/09/18 09:21**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	74		4.0	1.2	mg/L			04/24/18 08:24	2
Sulfate	1500		300	84	mg/L			04/23/18 13:43	60

**Client Sample ID: AY08718 MW-7**

**Lab Sample ID: 400-151978-7**

**Date Collected: 04/09/18 10:20**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30		2.0	0.60	mg/L			04/24/18 08:11	1
Sulfate	1300		300	84	mg/L			04/23/18 13:43	60

**Client Sample ID: AY08719 MW-7 DUP**

**Lab Sample ID: 400-151978-8**

**Date Collected: 04/09/18 10:20**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30		2.0	0.60	mg/L			04/24/18 08:11	1
Sulfate	1300		300	84	mg/L			04/23/18 13:43	60

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

**Client Sample ID: AY08720 MW-6**

**Lab Sample ID: 400-151978-9**

Date Collected: 04/09/18 11:34

Matrix: Water

Date Received: 04/12/18 09:32

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		2.0	0.60	mg/L			04/24/18 08:11	1
Sulfate	1900		300	84	mg/L			04/23/18 13:43	60

**Client Sample ID: AY08721 MW-5**

**Lab Sample ID: 400-151978-10**

Date Collected: 04/09/18 12:52

Matrix: Water

Date Received: 04/12/18 09:32

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.0		2.0	0.60	mg/L			04/24/18 08:11	1
Sulfate	2000		300	84	mg/L			04/23/18 13:47	60

**Client Sample ID: AY08722 MW-4**

**Lab Sample ID: 400-151978-11**

Date Collected: 04/09/18 14:00

Matrix: Water

Date Received: 04/12/18 09:32

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			04/24/18 08:11	1
Sulfate	2300		400	110	mg/L			04/23/18 15:10	80

**Client Sample ID: AY08723 MW-3**

**Lab Sample ID: 400-151978-12**

Date Collected: 04/09/18 15:55

Matrix: Water

Date Received: 04/12/18 09:32

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			04/24/18 08:11	1
Sulfate	1900		300	84	mg/L			04/23/18 13:47	60

**Client Sample ID: AY08724 FB-2**

**Lab Sample ID: 400-151978-13**

Date Collected: 04/09/18 15:30

Matrix: Water

Date Received: 04/12/18 09:32

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			04/24/18 07:56	1
Sulfate	2.9	J	5.0	1.4	mg/L			04/23/18 12:57	1

**Client Sample ID: AY08725 MW-2**

**Lab Sample ID: 400-151978-14**

Date Collected: 04/10/18 09:30

Matrix: Water

Date Received: 04/12/18 09:32

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		2.0	0.60	mg/L			04/24/18 07:56	1
Sulfate	770		200	56	mg/L			04/23/18 13:25	40

# Client Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

**Client Sample ID: AY08726 MW-1**

**Lab Sample ID: 400-151978-15**

**Date Collected: 04/10/18 10:45**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.8		2.0	0.60	mg/L			04/24/18 08:53	1
Sulfate	1400		300	84	mg/L			04/23/18 13:47	60

**Client Sample ID: AY08727 EB-1**

**Lab Sample ID: 400-151978-16**

**Date Collected: 04/10/18 11:45**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

## Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	<0.52		1.0	0.52	ug/L			04/23/18 09:28	1
Dichlorodifluoromethane	<0.85		1.0	0.85	ug/L			04/23/18 09:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		1.0	0.50	ug/L			04/23/18 09:28	1

## Surrogate

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		78 - 118		04/23/18 09:28	1
Dibromofluoromethane	94		81 - 121		04/23/18 09:28	1
Toluene-d8 (Surr)	100		80 - 120		04/23/18 09:28	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			04/24/18 08:53	1
Sulfate	<1.4		5.0	1.4	mg/L			04/23/18 13:01	1

## Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	129	U	134	134	500	216	pCi/L	05/08/18 12:16	05/09/18 00:24	1

## Definitions/Glossary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

### Qualifiers

#### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

**Client Sample ID: AY08412 MW-10**  
**Date Collected: 04/06/18 12:40**  
**Date Received: 04/10/18 09:24**

**Lab Sample ID: 400-151978-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	393958	04/15/18 16:49	RS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	394490	04/19/18 09:58	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	394934	04/23/18 10:00	RRC	TAL PEN
Total/NA	Prep	LSC_Dist_Susp			362769	04/25/18 16:04	JDL	TAL SL
Total/NA	Analysis	906.0		1	362916	04/25/18 22:28	SMR	TAL SL

**Client Sample ID: AY08413 MW-11**  
**Date Collected: 04/06/18 09:52**  
**Date Received: 04/10/18 09:24**

**Lab Sample ID: 400-151978-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	393958	04/15/18 17:15	RS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	394490	04/19/18 10:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	394934	04/23/18 10:00	RRC	TAL PEN
Total/NA	Prep	LSC_Dist_Susp			362769	04/25/18 16:04	JDL	TAL SL
Total/NA	Analysis	906.0		1	362916	04/25/18 23:10	SMR	TAL SL

**Client Sample ID: AY08414 MW-12**  
**Date Collected: 04/06/18 11:00**  
**Date Received: 04/10/18 09:24**

**Lab Sample ID: 400-151978-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	393958	04/15/18 17:40	RS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	394490	04/19/18 10:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	394934	04/23/18 10:00	RRC	TAL PEN
Total/NA	Prep	LSC_Dist_Susp			362769	04/25/18 16:04	JDL	TAL SL
Total/NA	Analysis	906.0		1	362916	04/25/18 23:52	SMR	TAL SL

**Client Sample ID: AY08415 MW-12 DUP**  
**Date Collected: 04/06/18 11:00**  
**Date Received: 04/10/18 09:24**

**Lab Sample ID: 400-151978-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	393958	04/15/18 18:06	RS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	394490	04/19/18 10:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	394934	04/23/18 10:00	RRC	TAL PEN
Total/NA	Prep	LSC_Dist_Susp			362769	04/25/18 16:04	JDL	TAL SL
Total/NA	Analysis	906.0		1	362916	04/26/18 00:12	SMR	TAL SL

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

**Client Sample ID: AY08416 FB-1**

**Lab Sample ID: 400-151978-5**

**Date Collected: 04/06/18 13:10**

**Matrix: Water**

**Date Received: 04/10/18 09:24**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	393958	04/15/18 13:50	RIS	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	394490	04/19/18 10:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	394934	04/23/18 10:00	RRC	TAL PEN
Total/NA	Prep	LSC_Dist_Susp			362769	04/25/18 16:04	JDL	TAL SL
Total/NA	Analysis	906.0		1	362916	04/26/18 00:33	SMR	TAL SL

**Client Sample ID: AY08717 MW-8**

**Lab Sample ID: 400-151978-6**

**Date Collected: 04/09/18 09:21**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CI- E		2	394981	04/24/18 08:24	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	394929	04/23/18 13:43	RRC	TAL PEN

**Client Sample ID: AY08718 MW-7**

**Lab Sample ID: 400-151978-7**

**Date Collected: 04/09/18 10:20**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CI- E		1	394981	04/24/18 08:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	394929	04/23/18 13:43	RRC	TAL PEN

**Client Sample ID: AY08719 MW-7 DUP**

**Lab Sample ID: 400-151978-8**

**Date Collected: 04/09/18 10:20**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CI- E		1	394981	04/24/18 08:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	394929	04/23/18 13:43	RRC	TAL PEN

**Client Sample ID: AY08720 MW-6**

**Lab Sample ID: 400-151978-9**

**Date Collected: 04/09/18 11:34**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CI- E		1	394981	04/24/18 08:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	394929	04/23/18 13:43	RRC	TAL PEN



# Lab Chronicle

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

**Client Sample ID: AY08721 MW-5**

**Lab Sample ID: 400-151978-10**

**Date Collected: 04/09/18 12:52**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	394981	04/24/18 08:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	394929	04/23/18 13:47	RRC	TAL PEN

**Client Sample ID: AY08722 MW-4**

**Lab Sample ID: 400-151978-11**

**Date Collected: 04/09/18 14:00**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	394981	04/24/18 08:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		80	394929	04/23/18 15:10	RRC	TAL PEN

**Client Sample ID: AY08723 MW-3**

**Lab Sample ID: 400-151978-12**

**Date Collected: 04/09/18 15:55**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	394981	04/24/18 08:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	394929	04/23/18 13:47	RRC	TAL PEN

**Client Sample ID: AY08724 FB-2**

**Lab Sample ID: 400-151978-13**

**Date Collected: 04/09/18 15:30**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	394981	04/24/18 07:56	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	394929	04/23/18 12:57	RRC	TAL PEN

**Client Sample ID: AY08725 MW-2**

**Lab Sample ID: 400-151978-14**

**Date Collected: 04/10/18 09:30**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	394981	04/24/18 07:56	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	394929	04/23/18 13:25	RRC	TAL PEN

**Client Sample ID: AY08726 MW-1**

**Lab Sample ID: 400-151978-15**

**Date Collected: 04/10/18 10:45**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	395030	04/24/18 08:53	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

**Client Sample ID: AY08726 MW-1**

**Lab Sample ID: 400-151978-15**

**Date Collected: 04/10/18 10:45**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		60	394929	04/23/18 13:47	RRC	TAL PEN

**Client Sample ID: AY08727 EB-1**

**Lab Sample ID: 400-151978-16**

**Date Collected: 04/10/18 11:45**

**Matrix: Water**

**Date Received: 04/12/18 09:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	394818	04/23/18 09:28	S1K	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	395030	04/24/18 08:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	394929	04/23/18 13:01	RRC	TAL PEN
Total/NA	Prep	LSC_Dist_Susp			364589	05/08/18 12:16	JDL	TAL SL
Total/NA	Analysis	906.0		1	364678	05/09/18 00:24	RTM	TAL SL

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# QC Association Summary

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

## GC/MS VOA

### Analysis Batch: 393958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151978-1	AY08412 MW-10	Total/NA	Water	8260C	
400-151978-2	AY08413 MW-11	Total/NA	Water	8260C	
400-151978-3	AY08414 MW-12	Total/NA	Water	8260C	
400-151978-4	AY08415 MW-12 DUP	Total/NA	Water	8260C	
400-151978-5	AY08416 FB-1	Total/NA	Water	8260C	
MB 400-393958/10	Method Blank	Total/NA	Water	8260C	
LCS 400-393958/1002	Lab Control Sample	Total/NA	Water	8260C	
400-152009-E-13 MS	Matrix Spike	Total/NA	Water	8260C	
400-152009-E-13 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	

### Analysis Batch: 394818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151978-16	AY08727 EB-1	Total/NA	Water	8260C	
MB 400-394818/5	Method Blank	Total/NA	Water	8260C	
LCS 400-394818/1003	Lab Control Sample	Total/NA	Water	8260C	
400-152099-A-15 MS	Matrix Spike	Total/NA	Water	8260C	
400-152099-A-15 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	

## General Chemistry

### Analysis Batch: 394490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151978-1	AY08412 MW-10	Total/NA	Water	SM 4500 Cl- E	
400-151978-2	AY08413 MW-11	Total/NA	Water	SM 4500 Cl- E	
400-151978-3	AY08414 MW-12	Total/NA	Water	SM 4500 Cl- E	
400-151978-4	AY08415 MW-12 DUP	Total/NA	Water	SM 4500 Cl- E	
400-151978-5	AY08416 FB-1	Total/NA	Water	SM 4500 Cl- E	
MB 400-394490/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-394490/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-394490/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-151978-1 MS	AY08412 MW-10	Total/NA	Water	SM 4500 Cl- E	
400-151978-1 MSD	AY08412 MW-10	Total/NA	Water	SM 4500 Cl- E	

### Analysis Batch: 394929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151978-6	AY08717 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-151978-7	AY08718 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-151978-8	AY08719 MW-7 DUP	Total/NA	Water	SM 4500 SO4 E	
400-151978-9	AY08720 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-151978-10	AY08721 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-151978-11	AY08722 MW-4	Total/NA	Water	SM 4500 SO4 E	
400-151978-12	AY08723 MW-3	Total/NA	Water	SM 4500 SO4 E	
400-151978-13	AY08724 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-151978-14	AY08725 MW-2	Total/NA	Water	SM 4500 SO4 E	
400-151978-15	AY08726 MW-1	Total/NA	Water	SM 4500 SO4 E	
400-151978-16	AY08727 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-394929/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-394929/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-394929/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-151946-F-5 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

# QC Association Summary

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

## General Chemistry (Continued)

### Analysis Batch: 394929 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151946-F-5 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-152150-N-2 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-152150-N-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

### Analysis Batch: 394934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151978-1	AY08412 MW-10	Total/NA	Water	SM 4500 SO4 E	
400-151978-2	AY08413 MW-11	Total/NA	Water	SM 4500 SO4 E	
400-151978-3	AY08414 MW-12	Total/NA	Water	SM 4500 SO4 E	
400-151978-4	AY08415 MW-12 DUP	Total/NA	Water	SM 4500 SO4 E	
400-151978-5	AY08416 FB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-394934/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-394934/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-394934/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-151946-F-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-151946-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

### Analysis Batch: 394981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151978-6	AY08717 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-151978-7	AY08718 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-151978-8	AY08719 MW-7 DUP	Total/NA	Water	SM 4500 Cl- E	
400-151978-9	AY08720 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-151978-10	AY08721 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-151978-11	AY08722 MW-4	Total/NA	Water	SM 4500 Cl- E	
400-151978-12	AY08723 MW-3	Total/NA	Water	SM 4500 Cl- E	
400-151978-13	AY08724 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-151978-14	AY08725 MW-2	Total/NA	Water	SM 4500 Cl- E	
MB 400-394981/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-394981/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-394981/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-151946-F-2 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-151946-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	
400-152473-E-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-152473-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

### Analysis Batch: 395030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151978-15	AY08726 MW-1	Total/NA	Water	SM 4500 Cl- E	
400-151978-16	AY08727 EB-1	Total/NA	Water	SM 4500 Cl- E	
MB 400-395030/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-395030/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-395030/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-151978-15 MS	AY08726 MW-1	Total/NA	Water	SM 4500 Cl- E	
400-151978-15 MSD	AY08726 MW-1	Total/NA	Water	SM 4500 Cl- E	

# QC Association Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

## Rad

### Prep Batch: 362769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151978-1	AY08412 MW-10	Total/NA	Water	LSC_Dist_Susp	
400-151978-2	AY08413 MW-11	Total/NA	Water	LSC_Dist_Susp	
400-151978-3	AY08414 MW-12	Total/NA	Water	LSC_Dist_Susp	
400-151978-4	AY08415 MW-12 DUP	Total/NA	Water	LSC_Dist_Susp	
400-151978-5	AY08416 FB-1	Total/NA	Water	LSC_Dist_Susp	
MB 160-362769/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-362769/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
400-151978-2 MS	AY08413 MW-11	Total/NA	Water	LSC_Dist_Susp	
400-151978-1 DU	AY08412 MW-10	Total/NA	Water	LSC_Dist_Susp	

### Prep Batch: 364589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151978-16	AY08727 EB-1	Total/NA	Water	LSC_Dist_Susp	
MB 160-364589/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-364589/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-28080-A-2-B MS	Matrix Spike	Total/NA	Water	LSC_Dist_Susp	
160-28080-A-1-B DU	Duplicate	Total/NA	Water	LSC_Dist_Susp	

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 400-393958/10**

**Matrix: Water**

**Analysis Batch: 393958**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	<0.52		1.0	0.52	ug/L			04/15/18 11:43	1
Dichlorodifluoromethane	<0.85		1.0	0.85	ug/L			04/15/18 11:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		1.0	0.50	ug/L			04/15/18 11:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	87		78 - 118		04/15/18 11:43	1
Dibromofluoromethane	96		81 - 121		04/15/18 11:43	1
Toluene-d8 (Surr)	93		80 - 120		04/15/18 11:43	1

**Lab Sample ID: LCS 400-393958/1002**

**Matrix: Water**

**Analysis Batch: 393958**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	48.6		ug/L		97	65 - 138
Dichlorodifluoromethane	50.0	49.5		ug/L		99	41 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	53.2		ug/L		106	60 - 139

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	88		78 - 118
Dibromofluoromethane	98		81 - 121
Toluene-d8 (Surr)	92		80 - 120

**Lab Sample ID: 400-152009-E-13 MS**

**Matrix: Water**

**Analysis Batch: 393958**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	<0.52		50.0	48.7		ug/L		97	54 - 150
Dichlorodifluoromethane	<0.85		50.0	38.2		ug/L		76	16 - 150
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		50.0	52.6		ug/L		105	55 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	87		78 - 118
Dibromofluoromethane	98		81 - 121
Toluene-d8 (Surr)	94		80 - 120

**Lab Sample ID: 400-152009-E-13 MSD**

**Matrix: Water**

**Analysis Batch: 393958**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane	<0.52		50.0	48.5		ug/L		97	54 - 150	0	30
Dichlorodifluoromethane	<0.85		50.0	47.7		ug/L		95	16 - 150	22	31
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		50.0	51.8		ug/L		104	55 - 150	2	30

TestAmerica Pensacola

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	86		78 - 118
Dibromofluoromethane	99		81 - 121
Toluene-d8 (Surr)	93		80 - 120

**Lab Sample ID: MB 400-394818/5**  
**Matrix: Water**  
**Analysis Batch: 394818**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Trichlorofluoromethane	<0.52		1.0	0.52	ug/L			04/23/18 09:04	1
Dichlorodifluoromethane	<0.85		1.0	0.85	ug/L			04/23/18 09:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		1.0	0.50	ug/L			04/23/18 09:04	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	92		78 - 118		04/23/18 09:04	1
Dibromofluoromethane	94		81 - 121		04/23/18 09:04	1
Toluene-d8 (Surr)	100		80 - 120		04/23/18 09:04	1

**Lab Sample ID: LCS 400-394818/1003**  
**Matrix: Water**  
**Analysis Batch: 394818**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	50.0	49.8		ug/L		100	41 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	57.4		ug/L		115	60 - 139

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	90		78 - 118
Dibromofluoromethane	94		81 - 121
Toluene-d8 (Surr)	101		80 - 120

**Lab Sample ID: 400-152099-A-15 MS**  
**Matrix: Water**  
**Analysis Batch: 394818**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	<0.85		50.0	53.7		ug/L		107	16 - 150
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		50.0	55.7		ug/L		111	55 - 150

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	93		78 - 118
Dibromofluoromethane	93		81 - 121
Toluene-d8 (Surr)	100		80 - 120

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: 400-152099-A-15 MSD**

**Matrix: Water**  
**Analysis Batch: 394818**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane	<0.52		50.0	41.4		ug/L		83	54 - 150	6	30
Dichlorodifluoromethane	<0.85		50.0	49.4		ug/L		99	16 - 150	8	31
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.50		50.0	52.2		ug/L		104	55 - 150	6	30
Surrogate	MSD %Recovery		MSD Qualifier	Limits							
4-Bromofluorobenzene	92			78 - 118							
Dibromofluoromethane	92			81 - 121							
Toluene-d8 (Surr)	99			80 - 120							

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 400-394490/6**

**Matrix: Water**  
**Analysis Batch: 394490**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			04/19/18 09:58	1

**Lab Sample ID: LCS 400-394490/7**

**Matrix: Water**  
**Analysis Batch: 394490**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	30.1		mg/L		100	90 - 110

**Lab Sample ID: MRL 400-394490/3**

**Matrix: Water**  
**Analysis Batch: 394490**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.29	J	mg/L		64	50 - 150

**Lab Sample ID: 400-151978-1 MS**

**Matrix: Water**  
**Analysis Batch: 394490**

**Client Sample ID: AY08412 MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.6		10.0	17.4		mg/L		98	73 - 120

**Lab Sample ID: 400-151978-1 MSD**

**Matrix: Water**  
**Analysis Batch: 394490**

**Client Sample ID: AY08412 MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	7.6		10.0	17.8		mg/L		102	73 - 120	2	8



# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: MB 400-394981/6**  
**Matrix: Water**  
**Analysis Batch: 394981**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			04/24/18 07:44	1

**Lab Sample ID: LCS 400-394981/7**  
**Matrix: Water**  
**Analysis Batch: 394981**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	30.3		mg/L		101	90 - 110

**Lab Sample ID: MRL 400-394981/3**  
**Matrix: Water**  
**Analysis Batch: 394981**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.82	J	mg/L		91	50 - 150

**Lab Sample ID: 400-151946-F-2 MS**  
**Matrix: Water**  
**Analysis Batch: 394981**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.6		10.0	13.9		mg/L		103	73 - 120

**Lab Sample ID: 400-151946-F-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 394981**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	3.6		10.0	13.9		mg/L		103	73 - 120	0	8

**Lab Sample ID: 400-152473-E-1 MS**  
**Matrix: Water**  
**Analysis Batch: 394981**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.2		10.0	16.0		mg/L		99	73 - 120

**Lab Sample ID: 400-152473-E-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 394981**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	6.2		10.0	16.1		mg/L		99	73 - 120	0	8

**Lab Sample ID: MB 400-395030/6**  
**Matrix: Water**  
**Analysis Batch: 395030**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			04/24/18 08:53	1

TestAmerica Pensacola

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

**Lab Sample ID: LCS 400-395030/7**  
**Matrix: Water**  
**Analysis Batch: 395030**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	30.7		mg/L		102	90 - 110

**Lab Sample ID: MRL 400-395030/3**  
**Matrix: Water**  
**Analysis Batch: 395030**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.66	J	mg/L		83	50 - 150

**Lab Sample ID: 400-151978-15 MS**  
**Matrix: Water**  
**Analysis Batch: 395030**

**Client Sample ID: AY08726 MW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.8		10.0	12.4		mg/L		96	73 - 120

**Lab Sample ID: 400-151978-15 MSD**  
**Matrix: Water**  
**Analysis Batch: 395030**

**Client Sample ID: AY08726 MW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2.8		10.0	12.6		mg/L		98	73 - 120	1	8

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-394929/6**  
**Matrix: Water**  
**Analysis Batch: 394929**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			04/23/18 12:50	1

**Lab Sample ID: LCS 400-394929/7**  
**Matrix: Water**  
**Analysis Batch: 394929**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.5		mg/L		97	90 - 110

**Lab Sample ID: MRL 400-394929/3**  
**Matrix: Water**  
**Analysis Batch: 394929**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.04	J	mg/L		81	50 - 150

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: 400-151946-F-5 MS**

**Matrix: Water**  
**Analysis Batch: 394929**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	10.4		mg/L		104	77 - 128

**Lab Sample ID: 400-151946-F-5 MSD**

**Matrix: Water**  
**Analysis Batch: 394929**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.0		mg/L		100	77 - 128	4	5

**Lab Sample ID: 400-152150-N-2 MS**

**Matrix: Water**  
**Analysis Batch: 394929**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	9.28		mg/L		93	77 - 128

**Lab Sample ID: 400-152150-N-2 MSD**

**Matrix: Water**  
**Analysis Batch: 394929**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	9.20		mg/L		92	77 - 128	1	5

**Lab Sample ID: MB 400-394934/6**

**Matrix: Water**  
**Analysis Batch: 394934**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			04/23/18 10:00	1

**Lab Sample ID: LCS 400-394934/7**

**Matrix: Water**  
**Analysis Batch: 394934**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.2		mg/L		95	90 - 110

**Lab Sample ID: MRL 400-394934/3**

**Matrix: Water**  
**Analysis Batch: 394934**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	3.99	J	mg/L		80	50 - 150

**Lab Sample ID: 400-151946-F-1 MS**

**Matrix: Water**  
**Analysis Batch: 394934**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	10.4		mg/L		104	77 - 128

TestAmerica Pensacola

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

**Lab Sample ID: 400-151946-F-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 394934**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.5		mg/L		105	77 - 128	0	5

## Method: 906.0 - Tritium, Total (LSC)

**Lab Sample ID: MB 160-362769/1-A**  
**Matrix: Water**  
**Analysis Batch: 362916**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 362769**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-124.3	U	171	171	500	323	pCi/L	04/25/18 16:04	04/25/18 21:47	1

**Lab Sample ID: LCS 160-362769/2-A**  
**Matrix: Water**  
**Analysis Batch: 362916**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 362769**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Tritium	2760	2414		393	500	329	pCi/L	87	74 - 114

**Lab Sample ID: 400-151978-2 MS**  
**Matrix: Water**  
**Analysis Batch: 362916**

**Client Sample ID: AY08413 MW-11**  
**Prep Type: Total/NA**  
**Prep Batch: 362769**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Tritium	-152	U	2750	2198		368	500	317	pCi/L	80	67 - 130

**Lab Sample ID: 400-151978-1 DU**  
**Matrix: Water**  
**Analysis Batch: 362916**

**Client Sample ID: AY08412 MW-10**  
**Prep Type: Total/NA**  
**Prep Batch: 362769**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Tritium	-31.5	U	-138.3	U	169	500	320	pCi/L	0.31	1

**Lab Sample ID: MB 160-364589/1-A**  
**Matrix: Water**  
**Analysis Batch: 364678**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 364589**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	141.0	U	141	141	500	229	pCi/L	05/08/18 12:16	05/08/18 18:31	1

**Lab Sample ID: LCS 160-364589/2-A**  
**Matrix: Water**  
**Analysis Batch: 364678**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 364589**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Tritium	2760	2438		366	500	220	pCi/L	88	74 - 114

TestAmerica Pensacola

# QC Sample Results

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

## Method: 906.0 - Tritium, Total (LSC) (Continued)

**Lab Sample ID: 160-28080-A-2-B MS**  
**Matrix: Water**  
**Analysis Batch: 364678**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 364589**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Tritium	424		2750	2447		365	500	217	pCi/L	74	67 - 130

**Lab Sample ID: 160-28080-A-1-B DU**  
**Matrix: Water**  
**Analysis Batch: 364678**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 364589**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Tritium	370		374.8		163	500	218	pCi/L	0.01	1

- 1
- 2
- 3
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- 9
- 10
- 11
- 12
- 13
- 14

**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2871

**Chain of Custody Record**



<b>Client Information</b>		Lab P/N: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Client Contact: Sarah Copeland		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-56525-24537.1	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		Page: Page 1 of 1	
City: Callera		State, Zip: AL, 35040		Job #: 151978	
Phone: 205-664-6121 (Tel)		Project #: 40007143		Preservation Codes:	
Email: scopel@alpower.com		SSOW#: Gorgias Landfill 1142 (ASD)		M - Hexane N - None O - ASD02 P - NIOSH Q - NIOSH R - NIOSH S - NIOSH T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDTA Z - other (specify)	
Due Date Requested:		TAT Requested (days):		Total Number of containers:	
PO #:		Routine		6	
Sample Date		Sample Time		Sample Type (C-comp, G-grab)	
4/6/18		1240		G	
4/6/18		0952		G	
4/6/18		1100		G	
4/6/18		1100		G	
4/6/18		1310		G	
Sample ID		Matrix (Water, Soil, etc.)		Preservation Code	
AY08412		Water		Water	
AY08413		Water		Water	
AY08414		Water		Water	
AY08415		Water		Water	
AY08416		Water		Water	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Trium EPA 908	
X		X		X	
8260 (CFC-11, CFC-12, CFS-113)		SM 4500 SDA E		SM 4500 Cl E	
X		X		X	
Boron-11		X		X	
X		X		X	
Special Instructions/Note:		400-151978 COC		MW-10	
				MW-11	
				MW-12	
				MW-12 Dup (Sample Duplicate)	
				FB-1 (Field Blank)	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:	
Empty Kit Requisitioned by:		Date:		Time:	
Requisitioned by: Sarah Copeland		Date/Time: 4/20/18, 1445		Date/Time: 4/20/18, 1445	
Requisitioned by:		Date/Time:		Date/Time:	
Requisitioned by:		Date/Time:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature: 15.3°C IRB	



TestAmerica Pensacola  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

### Chain of Custody Record



<b>Client Information</b> Client Contact: Sarah Copeland Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Calera State, Zip: AL, 35040 Phone: 205-664-6121 (Tel) Email: scopela@southemco.com Project Name: CCR Site: Gorgas Landfill 1142 (ASD)		Lab P/N: Whitire, Cheyenne R E-Mail: Cheyenne.whitire@testamericainc.com Carrier Tracking Note(s): Job #: 151978		COC No: 400-56525-24537.1 Page: Page 1 of 1		
<b>Analysis Requested</b> Due Date Requested: TAT Requested (days): Routine PO #: WO #: Project #: 40007143 SOW#:		Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No Tritium EPA 906 <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No SM 4500 ClE <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No SM 4500 SO4 E <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No B260 (CFC-11, CFC-12, CFS-113) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No Boron-11 <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Total Number of Containers: 6 Special Instructions/Note: 400-751978 COC		
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (M=Water, S=Soil, O=Other)	Preservation Code:	Special Instructions/Note:
AY08717	4/9/18	0921	G	Water	MMW-6	
AY08718	4/9/18	1020	G	Water	MMW-7	
AY08719	4/9/18	1020	G	Water	MMW-7 Dup (Sample Duplicate)	
AY08720	4/9/18	1134	G	Water	MMW-6	
AY08721	4/9/18	1252	G	Water	MMW-5	
AY08722	4/9/18	1400	G	Water	MMW-4	
AY08723	4/9/18	1555	G	Water	MMW-3	
AY08724	4/9/18	1530	G	Water	FB-2 (Field Blank)	
AY08725	4/10/18	930	G	Water	MMW-2	
AY08726	4/10/18	1045	G	Water	MMW-1	
AY08727	4/10/18	1145	G	Water	EB-1 (Equipment Blank)	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)						
Empty Kit Relinquished by: _____ Date: _____ Relinquished by: Sarah Copeland Date/Time: 4/12/2018; 1345 Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____						
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature, °C and Other Comments: 6.0°C IRB						



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-151978-1  
SDG Number: Gorgas Landfill 1142 (ASD)

**Login Number: 151978**

**List Number: 1**

**Creator: Whitmire, Cheyenne R**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR8, 15.3°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-151978-1  
SDG Number: Gorgas Landfill 1142 (ASD)

**Login Number: 151978**  
**List Number: 2**  
**Creator: Taylor, Kristene N**

**List Source: TestAmerica St. Louis**  
**List Creation: 04/12/18 04:31 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-151978-1  
SDG Number: Gorgas Landfill 1142 (ASD)

**Login Number: 151978**  
**List Number: 3**  
**Creator: Taylor, Kristene N**

**List Source: TestAmerica St. Louis**  
**List Creation: 05/05/18 11:57 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	21.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
 SDG: Gorgas Landfill 1142 (ASD)

### Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18 *
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

### Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18 *
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18 *
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542018-1	07-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-1  
SDG: Gorgas Landfill 1142 (ASD)

## Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New Jersey	NELAP	2	MO002	06-30-18 *
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18 *
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-151978-2

TestAmerica SDG: Gorgas Landfill 1142 (ASD)

Client Project/Site: CCR Plant Gorgas

For:

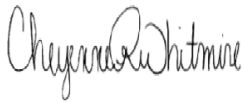
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

7/9/2018 3:50:12 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Sample Summary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-2  
SDG: Gorgas Landfill 1142 (ASD)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151978-1	AY08412 MW-10	Water	04/06/18 12:40	04/10/18 09:24
400-151978-3	AY08414 MW-12	Water	04/06/18 11:00	04/10/18 09:24
400-151978-4	AY08415 MW-12 DUP	Water	04/06/18 11:00	04/10/18 09:24
400-151978-5	AY08416 FB-1	Water	04/06/18 13:10	04/10/18 09:24
400-151978-16	AY08727 EB-1	Water	04/10/18 11:45	04/12/18 09:32

## Definitions/Glossary

Client: Alabama Power General Test Laboratory  
Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-2  
SDG: Gorgas Landfill 1142 (ASD)

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2871

## Chain of Custody Record



<b>Client Information</b>		Lab P/N: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Client Contact: Sarah Copeland		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-56525-24537.1	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		Page: Page 1 of 1	
City: Callera		State, Zip: AL, 35040		Job #: 151978	
Phone: 205-664-6121 (Tel)		PO #: [Blank]		Preservation Codes:	
Email: scopel@alpower.com		WO #: [Blank]		M - Hexane N - None O - ASD02 P - NAD04S Q - NAD04S R - NAD04S S - NAD04S T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 X - EDTA Y - EDTA Z - other (specify)	
Project Name: CCR		Project #: 40007143		Other: [Blank]	
Site: Gorgias Landfill 1142 (ASD)		SSOW#: [Blank]		Total Number of containers	
Due Date Requested:		TAT Requested (days):		Analysis is Requested	
Sample Date		Sample Time	Sample Type (C-comp, G-grab)	Matrix (Water, Soil, Sediment, etc.)	Preservation Code
AY08412	4/6/18	1240	G	Water	Water
AY08413	4/6/18	0952	G	Water	Water
AY08414	4/6/18	1100	G	Water	Water
AY08415	4/6/18	1100	G	Water	Water
AY08416	4/6/18	1310	G	Water	Water
Sample Identification		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
AY08412		X		X	
AY08413		X		X	
AY08414		X		X	
AY08415		X		X	
AY08416		X		X	
Special Instructions/Note:		SM 4500 Cl <sub>E</sub>		SM 4500 SOD <sub>E</sub>	
AY08412		X		X	
AY08413		X		X	
AY08414		X		X	
AY08415		X		X	
AY08416		X		X	
MW-10		6		6	
MW-11		5		5	
MW-12		6		6	
MW-12 Dup (Sample Duplicate)		6		6	
FB-1 (Field Blank)		6		6	
QR Code		400-151978 COC		[Blank]	
Return To Client		Disposal By Lab		Archive For	
Special Instructions/QC Requirements:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Months	
Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/>		Date:		Date:	
Empty Kit Requisitioned by:		Date/Time: 4/20/18, 1445		Date/Time: [Blank]	
Relinquished by: Sarah Copeland		Company: APC		Company: [Blank]	
Relinquished by:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature: 15.3°C IRB	



### Chain of Custody Record

<b>Client Information</b> Sampler: Nick Pitts Client Contact: Sarah Copeland Lab P/N: Whitire, Cheyenne R E-Mail: cheyenne.whitire@testamericainc.com		Carrier Tracking Note(s): COC No: 400-56525-24537.1 Page: Page 1 of 1 Job #: 151978	
Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Calera State, Zip: AL, 35040 Phone: 205-664-6121(Tel) Email: spcopela@southemco.com Project Name: CCR Site: Gorgas Landfill 1142 (ASD)		<b>Analysis Requested</b> Due Date Requested: TAT Requested (days): Routine PO #: WO #: Project #: 40007143 SSON#:	
<b>Sample Identification</b> Sample Date Sample Time Sample Type (C=Comp, G=Grab) Matrix (M=Water, S=Solid, O=Other) Preservation Code: Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) Tritium EPA 906 SM 4500 ClE SM 4500 SO4 E 8260 (CFC-11, CFC-12, CFS-113) Boron-11		Total Number of Containers Special Instructions/Note: MW-6 MW-7 MW-7 Dup (Sample Duplicate) MW-6 MW-5 MW-4 MW-3 FB-2 (Field Blank) MW-2 MW-1 EB-1 (Equipment Blank)	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:	
Empty Kit Relinquished by: Relinquished by: Sarah Copeland Date/Time: 4/12/2018; 1345		Method of Shipment: Date/Time: 4-12-18 0932 Company: TA-Pen	
Relinquished by: Date/Time:		Relinquished by: Date/Time:	
Relinquished by: Date/Time:		Relinquished by: Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature, °C and Other Comments: 6.0°C IRB	



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-151978-2  
SDG Number: Gorgas Landfill 1142 (ASD)

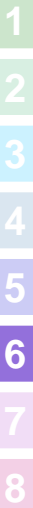
**Login Number: 151978**

**List Number: 1**

**Creator: Whitmire, Cheyenne R**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR8, 15.3°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory  
 Project/Site: CCR Plant Gorgas

TestAmerica Job ID: 400-151978-2  
 SDG: Gorgas Landfill 1142 (ASD)

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-18 *

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



Isotope Analyses for:  
TestAmerica Pensacola

IT2 FILE #  
180096

2018-07-09

Approved by:

*Orfan SStash*

**Orfan Shouakar-Stash, PhD**  
**Director**

Isotope Tracer Technologies Inc.  
695 Rupert St. Unit B, Waterloo, ON, N2V 1Z5

Tel: 519-886-5555 | Fax: 519-886-5575

Email: [orfan@it2isotopes.com](mailto:orfan@it2isotopes.com)

Website: [www.it2isotopes.com](http://www.it2isotopes.com)



**Client:** TestAmerica Pensacola  
**Address:** 3355 McLemore Drive  
 Pensacola, FL 32514  
 USA  
**Tel:** 850-474-1001  
**Fax:** 850-478-2671  
**Attn.:** Cheyenne R Whitmire  
**E-mail:** [cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

**File Number:** 180096  
**Project Number:** 40007143  
**Project Name:** CCR

#	Sample ID	Sample Collection		Sample #	$\delta^{11}\text{B}$	Result	Stdv
		Date	Time				
1	AY08412 MW-10 (400-151978-1)	4-6-18	12:40	50270	X	18.7	
2	AY08414 MW-12 (400-151978-3)	4-6-18	11:00	50271	X	16.2	
3	AY08415 MW-12 DUP (400-151978-4)	4-6-18	11:00	50272	X	17.1	
4	AY08416 FB-1 (400-151978-5)	4-6-18	13:10	50273	X	BQL	
5	AY08727 EB-1 (400-151978-16)	4-10-18	11:45	50274	X	BQL	

**Notes:**

BQL: Below Quantification Limits - Intensity is very small.

**IIB Analyses****Instrument Used:**

Thermal Ionization Mass Spectrometry (TIMS), TI-Box, spectromat, Germany

**Standard Used:**

120 ratios are taken for each sample and the average is used to calculate the delta value.

Delta values are calculated with respect to NIST SRM951a.

A secondary standard of sea water (SB1) is ran with each carousel.

**Typical Standard deviation:**

+/- 2 permil

Approved by:

*Orfan SStash*

**Orfan Shouakar-Stash, PhD****Director**

Isotope Tracer Technologies Inc.

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Website: [www.it2isotopes.com](http://www.it2isotopes.com)

Alabama Power General Test Laboratory  
744 County Road 87, GSC#8  
Calera, AL 35040  
(205) 664-6032 or 6171  
FAX (205) 257-1654

# Analytical Report



**Sample Group :** WMWGORLF\_1183  
**Project/Site :** Gorgas Landfill  
Parrish, AL 35580  
**For :** Southern Company Services  
3535 Colonnade Parkway  
Birmingham, AL 35243  
**Attention :** Dustin Brooks & Greg Dyer  
**Released By :** Laura Midkiff  
lbmidkif@southernco.com  
(205) 664-6197

The following data has been reviewed and approved by:

Quality Control:

Laura Midkiff

Digitally signed by Laura Midkiff  
DN: cn=Laura Midkiff, o=Alabama Power  
Company, ou=Environmental Affairs,  
email=lbmidkif@southernco.com, c=US  
Date: 2018.12.12 15:48:40 -0600

Supervision: T. Durant  
Maske

Digitally signed by T. Durant Maske  
DN: cn=T. Durant Maske, o=Alabama  
Power Company, ou=Environmental  
Affairs, email=tdmaske@southernco.com,  
c=US  
Date: 2018.12.13 17:01:09 -0600

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY27148

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	77.9	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		10.15	0.1015	0.5075	16.9	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		20.3	0.203	1.015	12.3	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	5.58	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	1.48	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	1.11	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	90.8	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	6.39	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	131	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.03	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			131	mg/L

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18



Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AY27148

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5	106	70 to 130	1.65	20
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23	99.5	70 to 130	1.52	20
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05				
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75	289	70 to 130	7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0			0.765	10
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23	102	70 to 130	1.98	20
AY27157	Mangnese, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115	183	70 to 130	0.400	20
AY27157	Mangnese, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115	248	70 to 130	2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75	102	70 to 130	0.504	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

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 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY27149

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		50.75	5.075	25.375	324	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		101.5	1.015	5.075	139	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		50.75	0.5075	2.5375	135	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	18.9	mg/L
* Manganese, Dissolved	ABB	12/6/2018	EPA 200.8		92.365	0.092365	0.461825	19.8	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		92.365	0.092365	0.461825	19.0	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		50.75	5.075	25.375	50.9	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	5.97	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	241	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.02	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			241	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AY27149

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit	
			Limit	MB					Limit	Rec	Limit	Prec			
AY27159	pH for Alkalinity	SU					6.97	6.95 to 7.05							
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5		106	70 to 130		1.65	20
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23		99.5	70 to 130		1.52	20
AY27157	Manganese, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115		248	70 to 130		2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75		102	70 to 130		0.504	20
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75		289	70 to 130		7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0					0.765	10
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23		102	70 to 130		1.98	20
AY27157	Manganese, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115		183	70 to 130		0.400	20

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

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 Calera, AL 35040  
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 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY27150

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	J 0.0158	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	U Not Detected	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	J 0.00228	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	J 0.00304	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	5.53	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	0.16	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.00	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.16	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AY27150

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	
			Limit	MB					Limit	Rec	Limit	Prec		
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5		106	70 to 130	1.65	20
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23		99.5	70 to 130	1.52	20
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75		289	70 to 130	7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0				0.765	10
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23		102	70 to 130	1.98	20
AY27157	Mangenes, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115		183	70 to 130	0.400	20
AY27157	Mangenes, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115		248	70 to 130	2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75		102	70 to 130	0.504	20
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05					

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**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY27151

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	337	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	0.875	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	0.889	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	9.25	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	6.03	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	5.79	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	44.5	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	6.57	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	261	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.09	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			261	mg/L

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AY27151

Sample	Analysis	Units	MB				LCS			Rec		Prec		
			MB	Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec		
AY27159	pH for Alkalinity	SU					6.97	6.95 to 7.05						
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5		106	70 to 130	1.65	20
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23		99.5	70 to 130	1.52	20
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23		102	70 to 130	1.98	20
AY27157	Mangeneses, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115		183	70 to 130	0.400	20
AY27157	Mangeneses, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115		248	70 to 130	2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75		102	70 to 130	0.504	20
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75		289	70 to 130	7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0				0.765	10

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 Calera, AL 35040  
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 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY27152

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	368	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	1.83	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	1.92	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	9.09	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	2.49	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	2.64	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	33.4	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	6.56	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	298	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.10	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			298	mg/L

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Expiration: June 30, 2019

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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AY27152

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	
			Limit	MB					Limit	Rec	Limit	Prec		
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5		106	70 to 130	1.65	20
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23		99.5	70 to 130	1.52	20
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75		289	70 to 130	7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0				0.765	10
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05					
AY27157	Mangnese, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115		248	70 to 130	2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75		102	70 to 130	0.504	20
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23		102	70 to 130	1.98	20
AY27157	Mangnese, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115		183	70 to 130	0.400	20

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 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY27153

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	280	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		10.15	0.1015	0.5075	21.4	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		20.3	0.203	1.015	19.0	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	5.56	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		92.365	0.092365	0.461825	12.7	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		92.365	0.092365	0.461825	12.6	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	26.8	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	6.30	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	186	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.04	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			186	mg/L

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Laboratory certification ID: E571114

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 LBM 12/12/18

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 Calera, AL 35040  
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 FAX (205) 257-1654

## Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AY27153

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5	106	70 to 130	1.65	20
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05				
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23	99.5	70 to 130	1.52	20
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23	102	70 to 130	1.98	20
AY27157	Mangenes, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115	183	70 to 130	0.400	20
AY27157	Mangenes, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115	248	70 to 130	2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75	102	70 to 130	0.504	20
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75	289	70 to 130	7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0			0.765	10

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 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY27154

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	242	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	3.32	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	3.59	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	8.22	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	3.26	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	3.41	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	30.0	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	6.63	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	410	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.16	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			410	mg/L

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\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AY27154

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5	106	70 to 130	1.65	20
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23	99.5	70 to 130	1.52	20
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23	102	70 to 130	1.98	20
AY27157	Manganese, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115	183	70 to 130	0.400	20
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05				
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75	289	70 to 130	7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0			0.765	10
AY27157	Manganese, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115	248	70 to 130	2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75	102	70 to 130	0.504	20

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Issued By: State of Florida, Department of Health

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 744 County Road 87, GSC#8  
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**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY27155

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	400	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		10.15	0.1015	0.5075	30.6	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		20.3	0.203	1.015	32.9	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	8.30	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		92.365	0.092365	0.461825	19.0	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		92.365	0.092365	0.461825	27.8	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	41.3	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	6.13	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	169	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.02	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			169	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AY27155

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	
			MB	Limit					Limit	Rec	Limit	Prec		
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5		106	70 to 130	1.65	20
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05					
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23		102	70 to 130	1.98	20
AY27157	Manganese, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115		183	70 to 130	0.400	20
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23		99.5	70 to 130	1.52	20
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75		289	70 to 130	7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0				0.765	10
AY27157	Manganese, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115		248	70 to 130	2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75		102	70 to 130	0.504	20

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Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY27156

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	350	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	7.19	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	0.00612	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	0.00796	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	34.8	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	6.75	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	220	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.12	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			220	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18



Alabama Power General Test Laboratory  
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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AY27156

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5	106	70 to 130	1.65	20
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23	99.5	70 to 130	1.52	20
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75	289	70 to 130	7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0			0.765	10
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05				
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23	102	70 to 130	1.98	20
AY27157	Mangnese, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115	183	70 to 130	0.400	20
AY27157	Mangnese, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115	248	70 to 130	2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75	102	70 to 130	0.504	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

**Customer Account:** WMWGORLF  
**Sample Date:** 19-Nov-18  
**Customer ID:**  
**Delivery Date:** 19-Nov-18

**Description:** Gorgas Landfill - MW-1

**Laboratory ID Number:** AY27157

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	281	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	7.39	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		92.365	0.092365	0.461825	10.1	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		92.365	0.092365	0.461825	10.3	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	34.7	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	5.36	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	23.8	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.00	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			23.8	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Recovery for Magnesium, Total Manganese, and Dissolved Manganese are out of spec. Spike amounts are less than 30% of the sample amount. LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AY27157

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	
			Limit	MB					Limit	Rec	Limit	Prec		
AY27157	Potassium, Total	mg/L	0.00215	0.0946	10.0	18.0	18.3	10.1	8.5 to 11.5		106	70 to 130	1.65	20
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05					
AY27157	Magnesium, Total	mg/L	0.000683	0.22	5.00	295	274	5.01	4.25 to 5.75		289	70 to 130	7.32	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0				0.765	10
AY27157	Manganese, Dissolved	mg/L	0.000164	0.005	0.10	10.4	10.1		0.085 to 0.115		248	70 to 130	2.23	20
AY27157	Sodium, Total	mg/L	-0.00102	0.22	5.00	39.8	39.6	5.18	4.25 to 5.75		102	70 to 130	0.504	20
AY27157	Iron, Total	mg/L	0.000591	0.022	0.2	0.204	0.200	0.205	0.17 to 0.23		102	70 to 130	1.98	20
AY27157	Manganese, Total	mg/L	0.000116	0.0022	0.10	10.5	10.4	0.0956	0.085 to 0.115		183	70 to 130	0.400	20
AY27157	Iron, Dissolved	mg/L	0.000462	0.022	0.2	0.199	0.196	0.201	0.17 to 0.23		99.5	70 to 130	1.52	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Recovery for Magnesium, Total Manganese, and Dissolved Manganese are out of spec. Spike amounts are less than 30% of the sample amount. LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
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**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY27158

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	248	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	1.93	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	2.17	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	6.57	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	3.94	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	3.98	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	25.0	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	6.33	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	279	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.06	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			279	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AY27158

Sample	Analysis	Units	MB	MB				LCS	LCS		Rec		Prec
				Limit	Spike	MS	MSD		Limit	Rec	Limit	Prec	
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	0.17 to 0.23	1660	70 to 130	12.1	20
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0			0.765	10
AY27161	Mangenes, Dissolved	mg/L	0.0000591	0.005	0.10	0.0947	0.100		0.085 to 0.115	93.0	70 to 130	5.85	20
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.96	4.25 to 5.75	582	70 to 130	13.2	20
AY27161	Mangenes, Total	mg/L	0.000116	0.0022	0.10	0.1000	0.101	0.0956	0.085 to 0.115	97.9	70 to 130	0.672	20
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	0.17 to 0.23	-17.2	70 to 130	2.02	20
AY27161	Potassium, Total	mg/L	0.00215	0.0946	10.0	19.6	19.0	10.1	8.5 to 11.5	109	70 to 130	3.04	20
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	4.25 to 5.75	272	70 to 130	14.1	20
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05				

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AY27159

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	248	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	1.81	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	2.11	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	6.56	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	3.84	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	3.94	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	24.9	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/27/2018	SM 4500H+ B		1		4.00	6.39	SU
Alkalinity, Total as CaCO3	EMG	11/27/2018	SM 2320 B		1		0.1	281	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			0.06	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/27/2018	SM 4500CO2 D		1			281	mg/L

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AY27159

Sample	Analysis	Units	MB				LCS			Rec		Prec		
			MB	Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec		
AY27159	Alkalinity, Total as CaCO3	mg/L					279	49.7	45.0 to 55.0			0.765	10	
AY27159	pH for Alkalinity	SU						6.97	6.95 to 7.05					
AY27161	Mangenes, Dissolved	mg/L	0.0000591	0.005	0.10	0.0947	0.100		0.085 to 0.115		93.0	70 to 130	5.85	20
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.96	4.25 to 5.75		582	70 to 130	13.2	20
AY27161	Mangenes, Total	mg/L	0.000116	0.0022	0.10	0.1000	0.101	0.0956	0.085 to 0.115		97.9	70 to 130	0.672	20
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	0.17 to 0.23		-17.2	70 to 130	2.02	20
AY27161	Potassium, Total	mg/L	0.00215	0.0946	10.0	19.6	19.0	10.1	8.5 to 11.5		109	70 to 130	3.04	20
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	4.25 to 5.75		272	70 to 130	14.1	20
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	0.17 to 0.23		1660	70 to 130	12.1	20

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Expiration: June 30, 2019

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 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY27160

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	578	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		10.15	0.1015	0.5075	24.0	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		20.3	0.203	1.015	20.3	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	9.86	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	5.39	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	5.52	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	68.5	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	J 3.88	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.10	NA	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. NA result for Alkalinity is due to initial sample pH reading below the alkalinity titration point of 4.5.

LBM 12/12/18



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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AY27160

Sample	Analysis	Units	MB	MB			MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike	MS				Limit	Rec	Limit	Prec	
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	0.17 to 0.23	1660	70 to 130	12.1	20	
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10	
AY27161	Potassium, Total	mg/L	0.00215	0.0946	10.0	19.6	19.0	10.1	8.5 to 11.5	109	70 to 130	3.04	20	
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	4.25 to 5.75	272	70 to 130	14.1	20	
AY27161	Manganese, Dissolved	mg/L	0.0000591	0.005	0.10	0.0947	0.100		0.085 to 0.115	93.0	70 to 130	5.85	20	
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.96	4.25 to 5.75	582	70 to 130	13.2	20	
AY27161	Manganese, Total	mg/L	0.000116	0.0022	0.10	0.1000	0.101	0.0956	0.085 to 0.115	97.9	70 to 130	0.672	20	
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	0.17 to 0.23	-17.2	70 to 130	2.02	20	
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05					

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. NA result for Alkalinity is due to initial sample pH reading below the alkalinity titration point of 4.5.

LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
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**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY27161

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	473	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Potassium, Total	ABB	11/27/2018	EPA 200.8		5.075	0.215	2.5	8.71	mg/L
* Manganese, Dissolved	ABB	11/26/2018	EPA 200.8		5.075	0.001	0.005	J 0.00167	mg/L
* Manganese, Total	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	J 0.00212	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	39.5	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	6.32	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	161	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.03	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			161	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

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 LBM 12/12/18

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 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 19-Nov-18  
 Customer ID:  
 Delivery Date: 19-Nov-18

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AY27161

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Prec Limit	
			MB	Limit					Rec	Limit			
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	0.17 to 0.23	1660	70 to 130	12.1	20
AY27161	Potassium, Total	mg/L	0.00215	0.0946	10.0	19.6	19.0	10.1	8.5 to 11.5	109	70 to 130	3.04	20
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	4.25 to 5.75	272	70 to 130	14.1	20
AY27161	Manganese, Dissolved	mg/L	0.0000591	0.005	0.10	0.0947	0.100		0.085 to 0.115	93.0	70 to 130	5.85	20
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.96	4.25 to 5.75	582	70 to 130	13.2	20
AY27161	Manganese, Total	mg/L	0.000116	0.0022	0.10	0.1000	0.101	0.0956	0.085 to 0.115	97.9	70 to 130	0.672	20
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	0.17 to 0.23	-17.2	70 to 130	2.02	20
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05				
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10

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**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY27321

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	184	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	6.82	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	6.83	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	6.64	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	1.88	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	1.95	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	140	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	6.70	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	276	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.13	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			276	mg/L

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

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 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

## Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AY27321

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.96	4.25 to 5.75	582	70 to 130	13.2	20
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	10.2	8.5 to 11.5	101	70 to 130	1.35	20
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	0.17 to 0.23	1660	70 to 130	12.1	20
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	4.25 to 5.75	272	70 to 130	14.1	20
AY27330	Manganese, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		0.085 to 0.115	96.2	70 to 130	0.964	20
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	0.17 to 0.23	-17.2	70 to 130	2.02	20
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05				
AY27330	Manganese, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	0.085 to 0.115	95.6	70 to 130	0.554	20

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Laboratory certification ID: E571114

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 LBM 12/12/18

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 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
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# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27322

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	U Not Detected	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	5.14	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.10	U Not Detected	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27322

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.96	4.25 to 5.75	582	70 to 130	13.2	20
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	10.2	8.5 to 11.5	101	70 to 130	1.35	20
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	0.17 to 0.23	1660	70 to 130	12.1	20
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	0.17 to 0.23	-17.2	70 to 130	2.02	20
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05				
AY27330	Manganese, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	0.085 to 0.115	95.6	70 to 130	0.554	20
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	4.25 to 5.75	272	70 to 130	14.1	20
AY27330	Manganese, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		0.085 to 0.115	96.2	70 to 130	0.964	20

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY27323

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	182	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	6.27	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	6.45	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	6.29	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	1.08	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	1.10	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	138	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	6.90	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	266	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.20	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			266	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18



Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AY27323

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Prec Limit
			Limit	Spike					Rec	Limit		
AY27329	Alkalinity, Total as CaCO3	mg/L				331	49.7	45.0 to 55.0			0.369	10
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.25 to 5.75	582	70 to 130	13.2	20
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	8.5 to 11.5	101	70 to 130	1.35	20
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	1660	70 to 130	12.1	20
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	-17.2	70 to 130	2.02	20
AY27329	pH for Alkalinity	SU					6.98	6.95 to 7.05				
AY27330	Manganese, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	95.6	70 to 130	0.554	20
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	272	70 to 130	14.1	20
AY27330	Manganese, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		96.2	70 to 130	0.964	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY27324

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	291	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	2.43	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	3.02	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	5.43	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	5.74	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	6.00	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	35.1	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	6.34	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	210	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.04	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			210	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AY27324

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Prec Limit	
			MB	Limit					Rec	Limit			
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.96	4.25 to 5.75	582	70 to 130	13.2	20
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	10.2	8.5 to 11.5	101	70 to 130	1.35	20
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	0.17 to 0.23	1660	70 to 130	12.1	20
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	0.17 to 0.23	-17.2	70 to 130	2.02	20
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05				
AY27330	Manganese, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	0.085 to 0.115	95.6	70 to 130	0.554	20
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	4.25 to 5.75	272	70 to 130	14.1	20
AY27330	Manganese, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		0.085 to 0.115	96.2	70 to 130	0.964	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY27325

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	433	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	2.73	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	3.33	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	6.00	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	1.00	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	1.07	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	58.7	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	6.57	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	267	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.09	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			267	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
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 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AY27325

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec Limit		
			MB	Limit					Rec	Limit			
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.96	4.25 to 5.75	582	70 to 130	13.2	20
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	10.2	8.5 to 11.5	101	70 to 130	1.35	20
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	0.17 to 0.23	1660	70 to 130	12.1	20
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	4.25 to 5.75	272	70 to 130	14.1	20
AY27330	Manganese, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		0.085 to 0.115	96.2	70 to 130	0.964	20
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	0.17 to 0.23	-17.2	70 to 130	2.02	20
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05				
AY27330	Manganese, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	0.085 to 0.115	95.6	70 to 130	0.554	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
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 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY27326

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	290	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		10.15	0.1015	0.5075	38.9	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		20.3	0.203	1.015	37.4	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	6.28	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	4.99	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	5.11	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	70.8	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	6.33	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	179	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.04	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			179	mg/L

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\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Recovery for Total Iron, Dissolved Iron, Magnesium, and Sodium are out of spec. Spike amounts are less than 30% of the sample amount. LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AY27326

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AY27326	Iron, Total	mg/L	0.000419	0.022	0.2	40.7	36.0	0.203	0.17 to 0.23	1660	70 to 130	12.1	20
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	10.2	8.5 to 11.5	101	70 to 130	1.35	20
AY27326	Iron, Dissolved	mg/L	0.000612	0.022	0.2	38.9	39.7	0.202	0.17 to 0.23	-17.2	70 to 130	2.02	20
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05				
AY27330	Manganese, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	0.085 to 0.115	95.6	70 to 130	0.554	20
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10
AY27326	Magnesium, Total	mg/L	0.00168	0.22	5.00	319	280	4.96	4.25 to 5.75	582	70 to 130	13.2	20
AY27326	Sodium, Total	mg/L	0.00405	0.22	5.00	84.4	73.3	5.12	4.25 to 5.75	272	70 to 130	14.1	20
AY27330	Manganese, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		0.085 to 0.115	96.2	70 to 130	0.964	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Recovery for Total Iron, Dissolved Iron, Magnesium, and Sodium are out of spec. Spike amounts are less than 30% of the sample amount. LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6 DUP

Laboratory ID Number: AY27327

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	263	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		10.15	0.1015	0.5075	39.1	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		20.3	0.203	1.015	33.8	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	6.37	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	4.86	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	5.16	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	65.7	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	6.32	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	179	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.04	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			179	mg/L

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\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18



Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-6 DUP

Laboratory ID Number: AY27327

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AY27330	Iron, Total	mg/L	0.000223	0.022	0.2	0.200	0.202	0.205	0.17 to 0.23	100	70 to 130	0.995	20
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10
AY27330	Magnesium, Total	mg/L	0.000115	0.22	5.00	4.95	4.96	4.96	4.25 to 5.75	99.0	70 to 130	0.202	20
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05				
AY27330	Mangenesese, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	0.085 to 0.115	95.6	70 to 130	0.554	20
AY27330	Mangenesese, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		0.085 to 0.115	96.2	70 to 130	0.964	20
AY27330	Sodium, Total	mg/L	-0.000277	0.22	5.00	5.14	5.20	5.18	4.25 to 5.75	103	70 to 130	1.16	20
AY27330	Iron, Dissolved	mg/L	0.000188	0.022	0.2	0.204	0.202	0.200	0.17 to 0.23	102	70 to 130	0.985	20
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	10.2	8.5 to 11.5	101	70 to 130	1.35	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 12/12/18

Alabama Power General Test Laboratory  
 744 County Road 87, GSC#8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 FAX (205) 257-1654

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY27328

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	247	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	2.19	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	2.37	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	6.17	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	1.89	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	1.70	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	43.8	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	6.97	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	325	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.28	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			325	mg/L

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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AY27328

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AY27330	Iron, Total	mg/L	0.000223	0.022	0.2	0.200	0.202	0.205	0.17 to 0.23	100	70 to 130	0.995	20
AY27330	Iron, Dissolved	mg/L	0.000188	0.022	0.2	0.204	0.202	0.200	0.17 to 0.23	102	70 to 130	0.985	20
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	10.2	8.5 to 11.5	101	70 to 130	1.35	20
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10
AY27330	Magnesium, Total	mg/L	0.000115	0.22	5.00	4.95	4.96	4.96	4.25 to 5.75	99.0	70 to 130	0.202	20
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05				
AY27330	Manganese, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	0.085 to 0.115	95.6	70 to 130	0.554	20
AY27330	Manganese, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		0.085 to 0.115	96.2	70 to 130	0.964	20
AY27330	Sodium, Total	mg/L	-0.000277	0.22	5.00	5.14	5.20	5.18	4.25 to 5.75	103	70 to 130	1.16	20

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**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY27329

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	295	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	3.94	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	5.01	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	8.03	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	1.13	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	1.14	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		20.3	2.03	10.15	49.6	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	6.77	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	330	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.18	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			330	mg/L

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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AY27329

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec	Limit
			Limit	MB					Limit	Rec	Limit	Prec		
AY27329	pH for Alkalinity	SU					6.98	6.95 to 7.05						
AY27330	Manganese, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	0.085 to 0.115	95.6	70 to 130	0.554	20	
AY27330	Iron, Dissolved	mg/L	0.000188	0.022	0.2	0.204	0.202	0.200	0.17 to 0.23	102	70 to 130	0.985	20	
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	10.2	8.5 to 11.5	101	70 to 130	1.35	20	
AY27330	Iron, Total	mg/L	0.000223	0.022	0.2	0.200	0.202	0.205	0.17 to 0.23	100	70 to 130	0.995	20	
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10	
AY27330	Magnesium, Total	mg/L	0.000115	0.22	5.00	4.95	4.96	4.96	4.25 to 5.75	99.0	70 to 130	0.202	20	
AY27330	Manganese, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		0.085 to 0.115	96.2	70 to 130	0.964	20	
AY27330	Sodium, Total	mg/L	-0.000277	0.22	5.00	5.14	5.20	5.18	4.25 to 5.75	103	70 to 130	1.16	20	

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**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27330

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Magnesium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Iron, Dissolved	RDA	11/30/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Iron, Total	RDA	11/29/2018	EPA 200.7		2.03	0.01	0.05	U Not Detected	mg/L
* Potassium, Total	ABB	12/3/2018	EPA 200.8		5.075	0.215	2.5	U Not Detected	mg/L
* Manganese, Dissolved	ABB	11/27/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Manganese, Total	ABB	12/3/2018	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Sodium, Total	RDA	11/29/2018	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
<b>General Characteristics</b>									
pH for Alkalinity	EMG	11/29/2018	SM 4500H+ B		1		4.00	5.44	SU
Alkalinity, Total as CaCO3	EMG	11/29/2018	SM 2320 B		1		0.1	0.14	mg/L
Carbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.00	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	11/29/2018	SM 4500CO2 D		1			0.14	mg/L

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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 20-Nov-18  
 Customer ID:  
 Delivery Date: 20-Nov-18

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AY27330

Sample	Analysis	Units	MB	MB				LCS		Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	
AY27330	Iron, Total	mg/L	0.000223	0.022	0.2	0.200	0.202	0.205	0.17 to 0.23	100	70 to 130	0.995	20
AY27329	pH for Alkalinity	SU						6.98	6.95 to 7.05				
AY27330	Mangenes, Total	mg/L	0.0000172	0.0022	0.10	0.0956	0.0961	0.0991	0.085 to 0.115	95.6	70 to 130	0.554	20
AY27329	Alkalinity, Total as CaCO3	mg/L					331	49.7	45.0 to 55.0			0.369	10
AY27330	Magnesium, Total	mg/L	0.000115	0.22	5.00	4.95	4.96	4.96	4.25 to 5.75	99.0	70 to 130	0.202	20
AY27330	Iron, Dissolved	mg/L	0.000188	0.022	0.2	0.204	0.202	0.200	0.17 to 0.23	102	70 to 130	0.985	20
AY27330	Potassium, Total	mg/L	0.00586	0.0946	10.0	10.1	10.2	10.2	8.5 to 11.5	101	70 to 130	1.35	20
AY27330	Mangenes, Dissolved	mg/L	0.0000390	0.005	0.10	0.0962	0.0971		0.085 to 0.115	96.2	70 to 130	0.964	20
AY27330	Sodium, Total	mg/L	-0.000277	0.22	5.00	5.14	5.20	5.18	4.25 to 5.75	103	70 to 130	1.16	20

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 LBM 12/12/18

## Definitions



Abbreviation	Description
DF	Dilution Factor
LCS	Lab Control Sample
LFM	Lab Fortified Matrix
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spec	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
E	Estimated reported value exceeded calibration range.
J	Reported value is an estimate because concentration is less than reporting limit.
N	Organic constituents tentatively identified. Confirmation is needed.
R	Matrix spike recovery is out of range.
U	Compound was analyzed, but not detected.
P	Precision is out of range.
C	Analyte was verified by re-analysis.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
L	Check standard is outside of the required specification limit.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
F	Water Field Group (WFG) qualifier; see comments for more information









# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA 11/19/2018 18:23

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Anthony Goggins	Location	Gorgas Landfill

Bottles	1	Metals	500 mL	3	Alkalinity	250 mL	5	N/A	N/A	7	N/A	N/A
	2	Dissolved Meta	500 mL	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-1	11/19/18	10:31	3	Groundwater		AY27157
MW-2	11/19/2018	11:37	3	Groundwater		AY27158
MW-2DUP	11/19/2018	11:37	3	Sample Duplicate		AY27159
MW-3	11/19/2018	13:24	3	Groundwater		AY27160
MW-4	11/19/2018	15:05	3	Groundwater		AY27161

Relinquished By	Received By	Date/Time
		11/19/2018 18:38

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> Cooler Temp <span style="border: 1px solid black; padding: 2px;">0.5 degrees C</span> Thermometer ID <span style="border: 1px solid black; padding: 2px;">5408-27568-2-2</span> pH Strip ID <span style="border: 1px solid black; padding: 2px;">6959-37692-30-13</span>
Turbidity ID	5160-26211-1-1	
Sample Event	1183	





# Appendix B

1<sup>st</sup> Semi-Annual

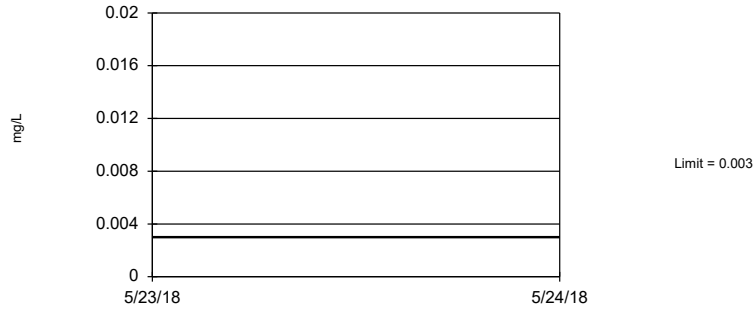
# Upper Tolerance Limits - App IV

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/16/2019, 11:09 AM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	70	n/a	n/a	100	n/a	n/a	0.02758	NP Inter(NDs)
Arsenic (mg/L)	0.005	70	n/a	n/a	81.43	n/a	n/a	0.02758	NP Inter(NDs)
Barium (mg/L)	0.0156	69	0.01161	0.002006	0	None	No	0.05	Inter
Beryllium (mg/L)	0.00689	69	n/a	n/a	88.41	n/a	n/a	0.02904	NP Inter(NDs)
Boron (mg/L)	0.06795	70	0.04287	0.01263	1.429	None	No	0.05	Inter
Cadmium (mg/L)	0.00473	68	n/a	n/a	70.59	n/a	n/a	0.03056	NP Inter(normal...
Chromium (mg/L)	0.01	70	n/a	n/a	95.71	n/a	n/a	0.02758	NP Inter(NDs)
Cobalt (mg/L)	0.3635	70	-3.48	1.243	14.29	None	ln(x)	0.05	Inter
Combined Radium 226 + 228 (pCi/L)	1.91	69	n/a	n/a	0	n/a	n/a	0.02904	NP Inter(normal...
Fluoride (mg/L)	0.4661	77	0.2519	0.1088	0	None	No	0.05	Inter
Lead (mg/L)	0.005	70	n/a	n/a	100	n/a	n/a	0.02758	NP Inter(NDs)
Lithium (mg/L)	0.237	69	n/a	n/a	0	n/a	n/a	0.02904	NP Inter(normal...
Mercury (mg/L)	0.0005	70	n/a	n/a	100	n/a	n/a	0.02758	NP Inter(NDs)
Molybdenum (mg/L)	0.01	70	n/a	n/a	100	n/a	n/a	0.02758	NP Inter(NDs)
Selenium (mg/L)	0.0209	70	n/a	n/a	75.71	n/a	n/a	0.02758	NP Inter(NDs)
Thallium (mg/L)	0.001	70	n/a	n/a	98.57	n/a	n/a	0.02758	NP Inter(NDs)



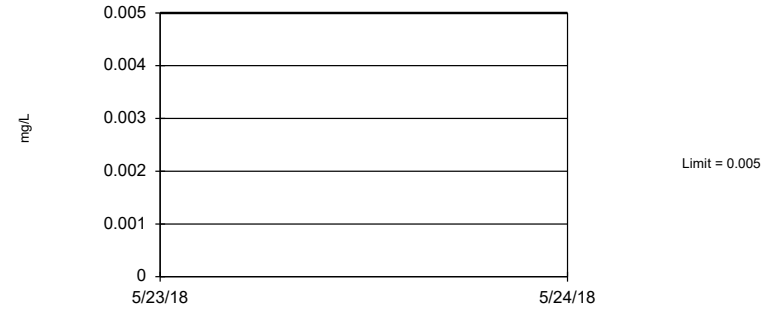
Tolerance Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Antimony Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Tolerance Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 70 background values. 81.43% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Arsenic Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

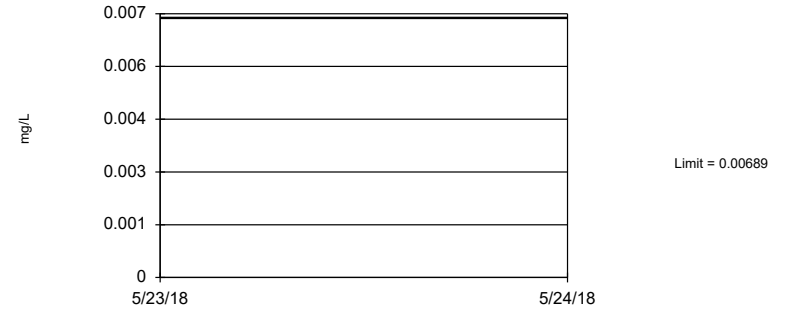
Tolerance Limit  
Interwell Parametric



95% coverage. Background Data Summary: Mean=0.01161, Std. Dev.=0.002006, n=69. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9781, critical = 0.951. Report alpha = 0.05.

Constituent: Barium Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

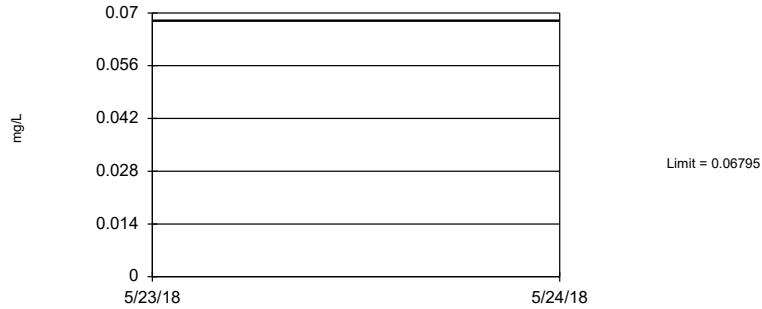
Tolerance Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 69 background values. 88.41% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02904.

Constituent: Beryllium Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

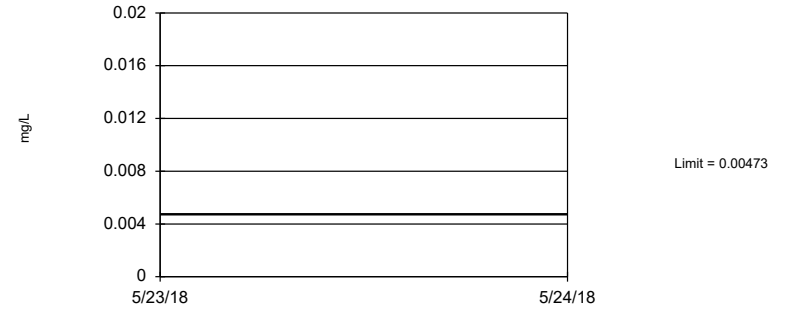
### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary: Mean=0.04287, Std. Dev.=0.01263, n=70, 1.429% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9656, critical = 0.952. Report alpha = 0.05.

Constituent: Boron Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### 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 68 background values. 70.59% NDs. 93.55% coverage at alpha=0.01; 95.51% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.03056.

Constituent: Cadmium Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

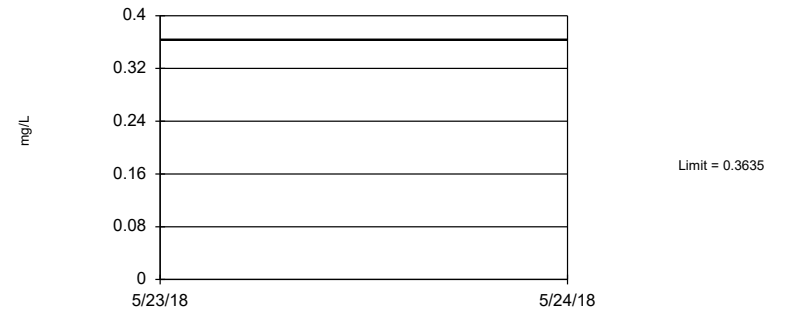
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 70 background values. 95.71% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Chromium Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

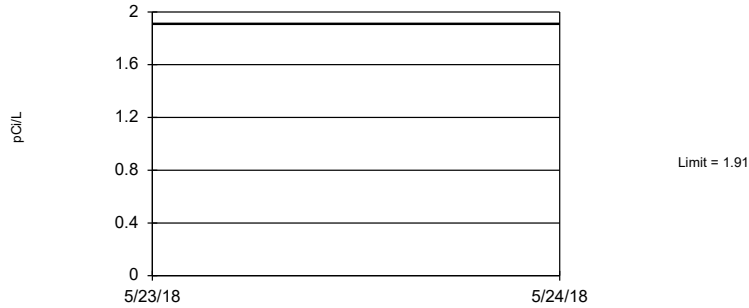
### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on natural log transformation): Mean=-3.48, Std. Dev.=1.243, n=70, 14.29% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9587, critical = 0.952. Report alpha = 0.05.

Constituent: Cobalt Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

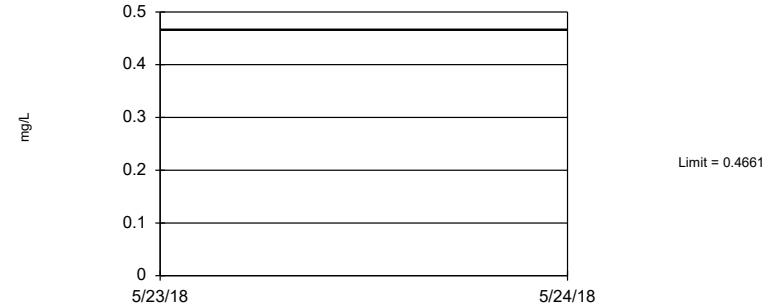
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02904.

Constituent: Combined Radium 226 + 228 Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary: Mean=0.2519, Std. Dev.=0.1088, n=77. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9615, critical = 0.957. Report alpha = 0.05.

Constituent: Fluoride Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

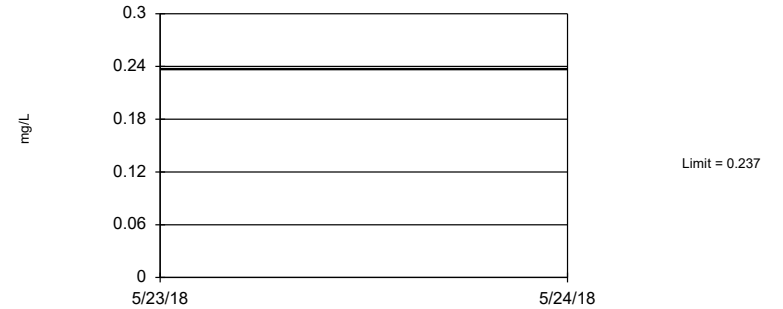
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Lead Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

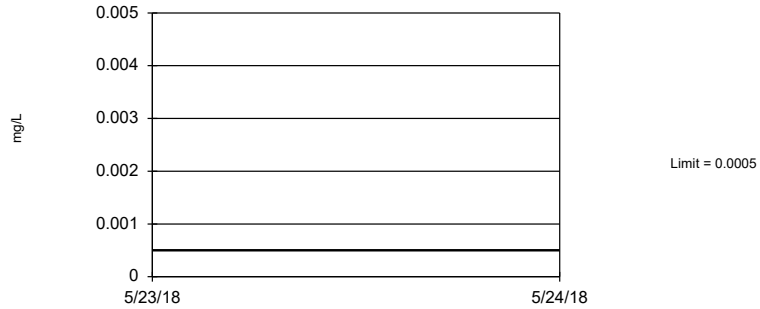
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02904.

Constituent: Lithium Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

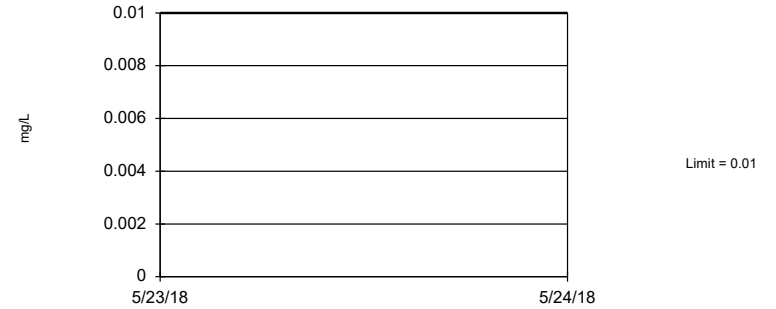
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Mercury Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

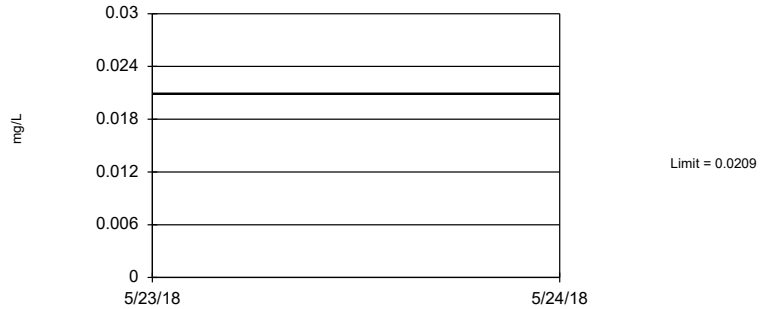
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Molybdenum Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

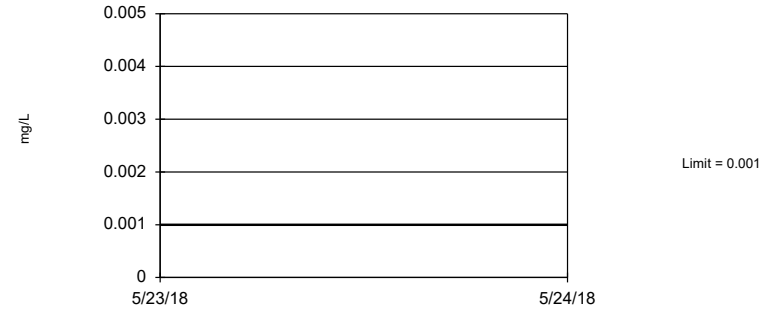
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 70 background values. 75.71% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Selenium Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 70 background values. 98.57% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Thallium Analysis Run 1/16/2019 11:08 AM View: UTL's - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

# Confidence Intervals - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/31/2019, 12:15 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Lithium (mg/L)	MW-20	0.2689	0.2555	0.237	Yes	10	0	No	0.01	Param.

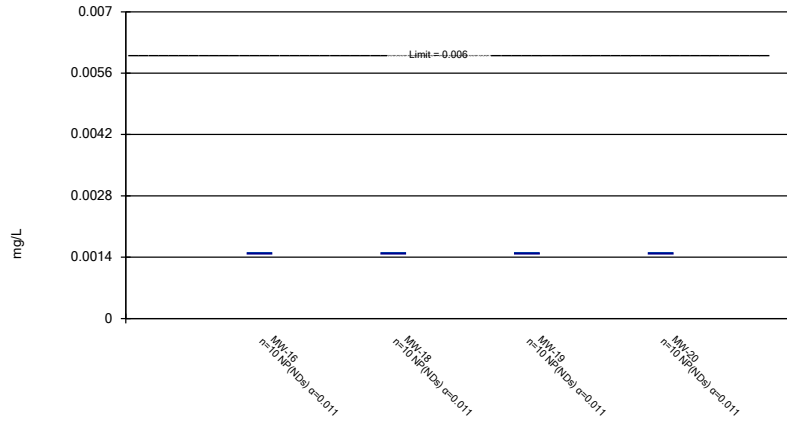
# Confidence Intervals - All Results

Plant William C Gorgas    Client: Southern Company    Data: Gorgas Gypsum Landfill    Printed 1/31/2019, 12:15 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	MW-16	0.0015	0.0015	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-18	0.0015	0.0015	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-19	0.0015	0.0015	0.006	No	10	100	No	0.011	NP (NDs)
Antimony (mg/L)	MW-20	0.0015	0.0015	0.006	No	10	100	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-16	0.004006	0.002848	0.01	No	10	0	No	0.01	Param.
Arsenic (mg/L)	MW-18	0.0025	0.0025	0.01	No	10	100	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-19	0.0025	0.0025	0.01	No	10	100	No	0.011	NP (NDs)
Arsenic (mg/L)	MW-20	0.0025	0.0025	0.01	No	10	100	No	0.011	NP (NDs)
Barium (mg/L)	MW-16	0.01375	0.01271	2	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-18	0.0113	0.0087	2	No	10	0	No	0.011	NP (normality)
Barium (mg/L)	MW-19	0.01097	0.009509	2	No	10	0	No	0.01	Param.
Barium (mg/L)	MW-20	0.01604	0.0149	2	No	10	0	No	0.01	Param.
Beryllium (mg/L)	MW-16	0.0015	0.0015	0.007	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-18	0.0015	0.0015	0.007	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-19	0.0015	0.0015	0.007	No	10	100	No	0.011	NP (NDs)
Beryllium (mg/L)	MW-20	0.0015	0.0015	0.007	No	10	100	No	0.011	NP (NDs)
Boron (mg/L)	MW-16	0.04822	0.04438	4	No	10	0	No	0.01	Param.
Boron (mg/L)	MW-18	0.03695	0.03129	4	No	10	0	No	0.01	Param.
Boron (mg/L)	MW-19	0.03834	0.0358	4	No	10	0	No	0.01	Param.
Boron (mg/L)	MW-20	0.1082	0.1038	4	No	10	0	No	0.01	Param.
Cadmium (mg/L)	MW-16	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-18	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-19	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Cadmium (mg/L)	MW-20	0.0005	0.0005	0.005	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-16	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-18	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Chromium (mg/L)	MW-20	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-16	0.009718	0.008612	0.3635	No	10	0	x^5	0.01	Param.
Cobalt (mg/L)	MW-18	0.005	0.00286	0.3635	No	10	90	No	0.011	NP (NDs)
Cobalt (mg/L)	MW-19	0.171	0.0717	0.3635	No	10	0	No	0.011	NP (normality)
Cobalt (mg/L)	MW-20	0.005	0.005	0.3635	No	10	100	No	0.011	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	MW-16	1.207	0.1285	5	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-18	0.9926	1.5e-7	5	No	10	0	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-19	0.8635	0.3563	5	No	10	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.193	0.6608	5	No	10	0	No	0.01	Param.
Fluoride (mg/L)	MW-16	0.18	0.168	4	No	11	0	No	0.006	NP (normality)
Fluoride (mg/L)	MW-18	0.32	0.3059	4	No	11	0	No	0.01	Param.
Fluoride (mg/L)	MW-19	0.34	0.28	4	No	11	0	No	0.006	NP (normality)
Fluoride (mg/L)	MW-20	0.133	0.1217	4	No	11	0	No	0.01	Param.
Lead (mg/L)	MW-16	0.0025	0.0025	0.015	No	10	100	No	0.011	NP (NDs)
Lead (mg/L)	MW-18	0.0025	0.0025	0.015	No	10	100	No	0.011	NP (NDs)
Lead (mg/L)	MW-19	0.0025	0.0025	0.015	No	10	100	No	0.011	NP (NDs)
Lead (mg/L)	MW-20	0.0025	0.0025	0.015	No	10	100	No	0.011	NP (NDs)
Lithium (mg/L)	MW-16	0.01797	0.01643	0.237	No	10	0	No	0.01	Param.
Lithium (mg/L)	MW-18	0.06217	0.05659	0.237	No	10	0	No	0.01	Param.
Lithium (mg/L)	MW-19	0.08807	0.06692	0.237	No	10	0	x^2	0.01	Param.
<b>Lithium (mg/L)</b>	<b>MW-20</b>	<b>0.2689</b>	<b>0.2555</b>	<b>0.237</b>	<b>Yes</b>	<b>10</b>	<b>0</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Mercury (mg/L)	MW-16	0.00025	0.00025	0.002	No	10	100	No	0.011	NP (NDs)
Mercury (mg/L)	MW-18	0.00025	0.00025	0.002	No	10	100	No	0.011	NP (NDs)
Mercury (mg/L)	MW-19	0.00025	0.00025	0.002	No	10	100	No	0.011	NP (NDs)
Mercury (mg/L)	MW-20	0.00025	0.00025	0.002	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-16	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-18	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-19	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Molybdenum (mg/L)	MW-20	0.005	0.005	0.1	No	10	100	No	0.011	NP (NDs)
Selenium (mg/L)	MW-16	0.005	0.005	0.05	No	10	100	No	0.011	NP (NDs)
Selenium (mg/L)	MW-18	0.005	0.00263	0.05	No	10	20	No	0.011	NP (normality)
Selenium (mg/L)	MW-19	0.005	0.005	0.05	No	10	100	No	0.011	NP (NDs)
Selenium (mg/L)	MW-20	0.005	0.005	0.05	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	MW-16	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	MW-18	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	MW-19	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)
Thallium (mg/L)	MW-20	0.0005	0.0005	0.002	No	10	100	No	0.011	NP (NDs)

### Non-Parametric Confidence Interval

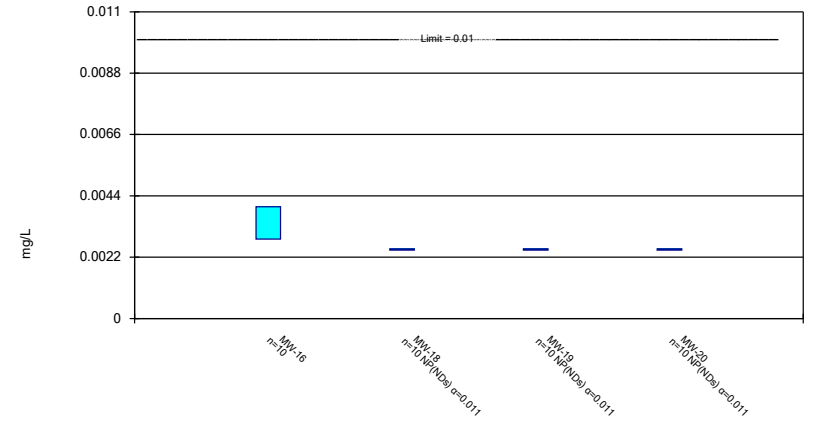
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Parametric and Non-Parametric (NP) Confidence Interval

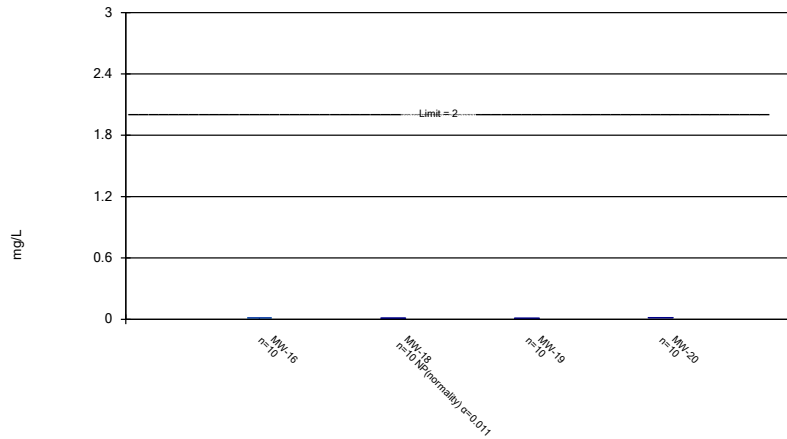
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Constituent: Arsenic Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Parametric and Non-Parametric (NP) Confidence Interval

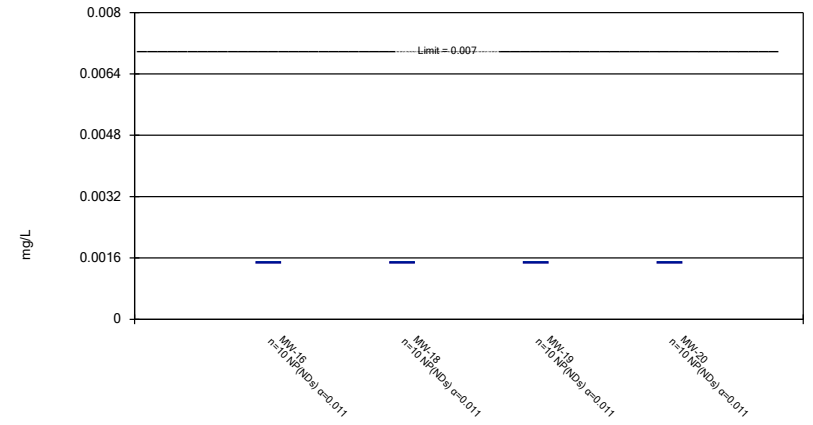
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Constituent: Barium Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

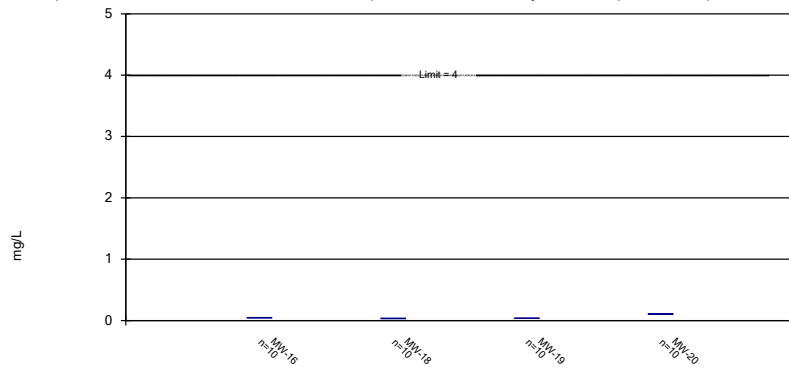
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Parametric Confidence Interval

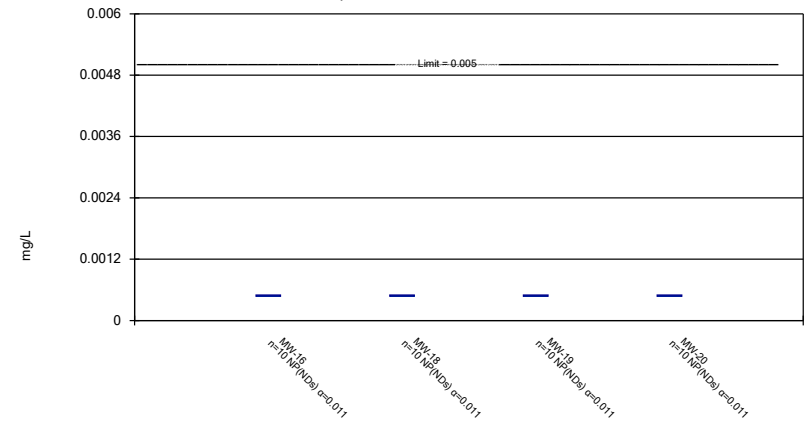
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Boron Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

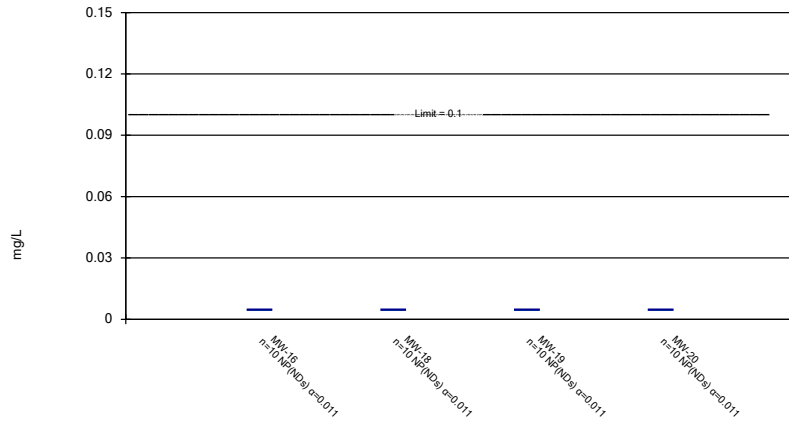
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

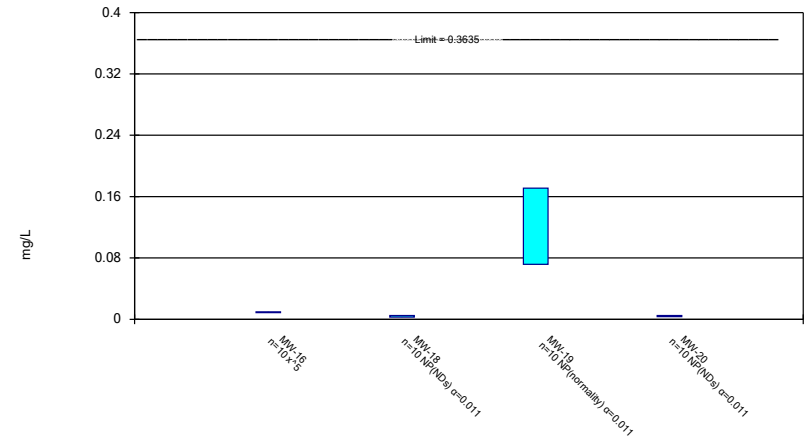
Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### 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.

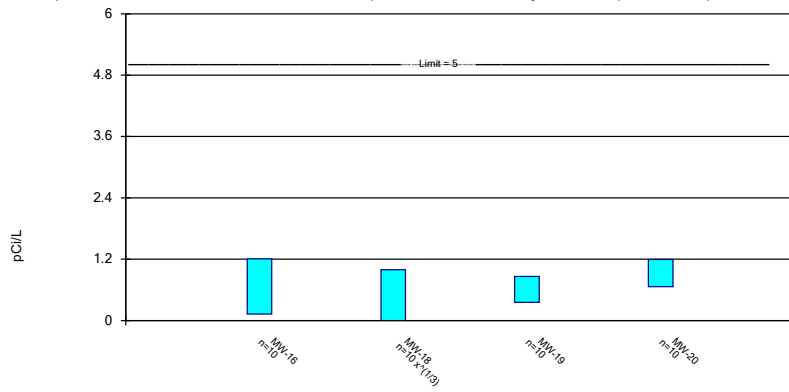


Constituent: Cobalt Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill



### Parametric Confidence Interval

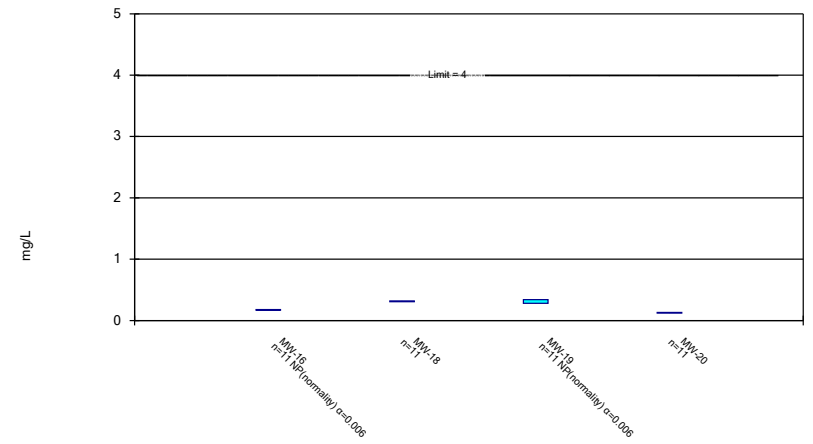
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Parametric and Non-Parametric (NP) Confidence Interval

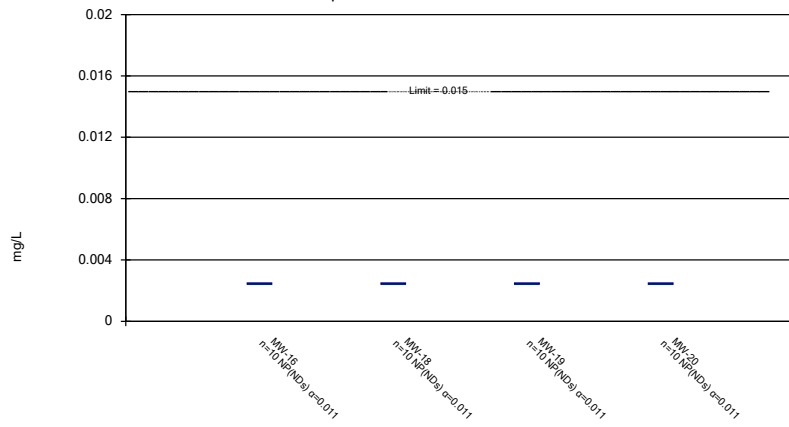
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

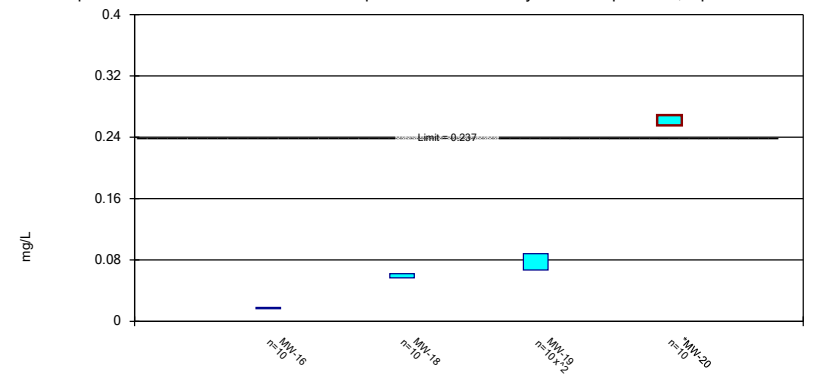
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Parametric Confidence Interval

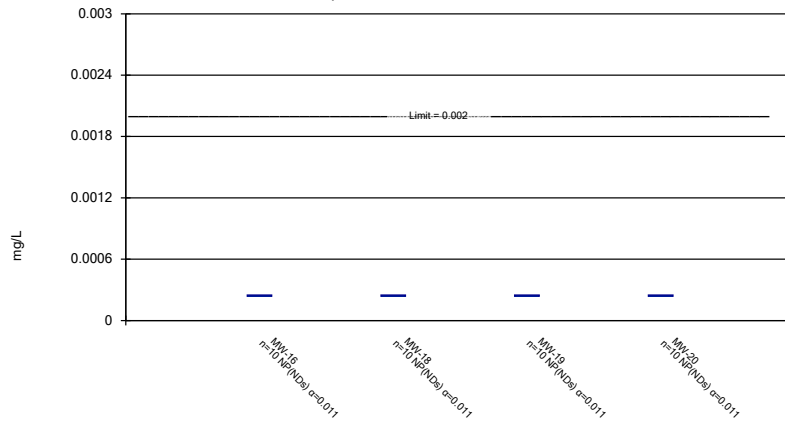
Compliance limit is exceeded.\* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

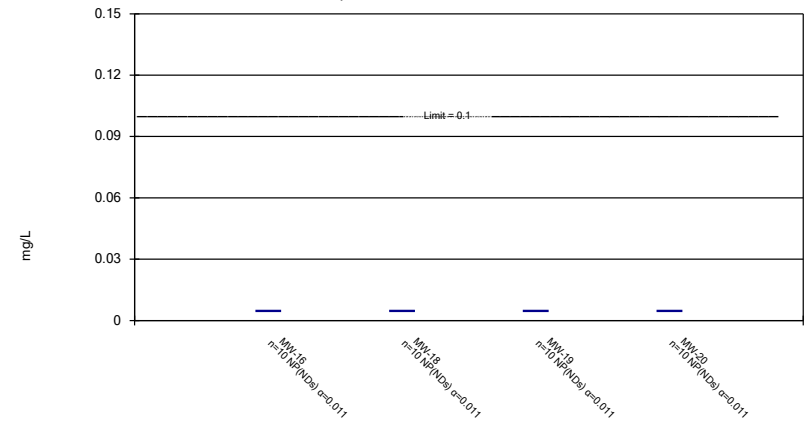
Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

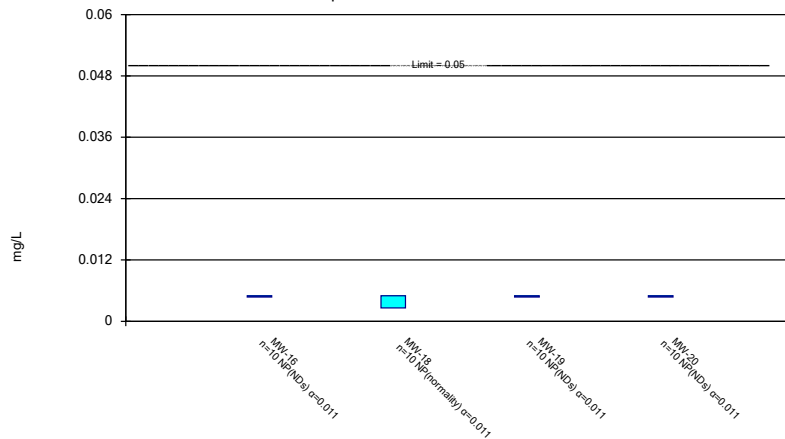
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

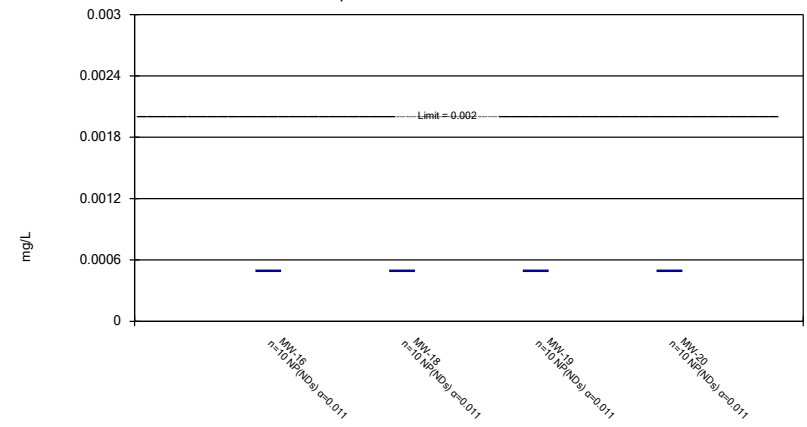
Compliance Limit is not exceeded.



Constituent: Selenium Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 1/31/2019 12:13 PM View: Confidence Intervals - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

# 2<sup>nd</sup> Semi-Annual

# Interwell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/9/2019, 1:29 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
<b>Boron (mg/L)</b>	<b>MW-20</b>	<b>0.06507</b>	<b>n/a</b>	<b>11/20/2018</b>	<b>0.114</b>	<b>Yes</b>	<b>77</b>	<b>10.39</b>	<b>No</b>	<b>0.00188</b>	<b>Param Inter 1 of 2</b>
<b>pH (SU)</b>	<b>MW-18</b>	<b>6.5</b>	<b>3.77</b>	<b>11/19/2018</b>	<b>6.54</b>	<b>Yes</b>	<b>84</b>	<b>0</b>	<b>n/a</b>	<b>0.00055</b>	<b>NP Inter (normality) ...</b>
<b>pH (SU)</b>	<b>MW-20</b>	<b>6.5</b>	<b>3.77</b>	<b>11/20/2018</b>	<b>6.81</b>	<b>Yes</b>	<b>84</b>	<b>0</b>	<b>n/a</b>	<b>0.00055</b>	<b>NP Inter (normality) ...</b>

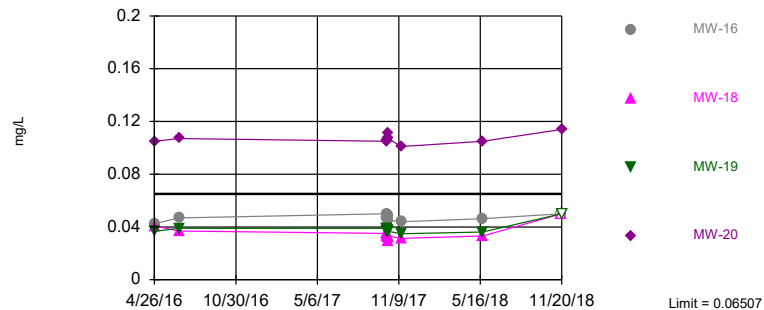
# Interwell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/9/2019, 1:29 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	MW-16	0.06507	n/a	11/19/2018	0.05ND	No	77	10.39	No	0.00188	Param Inter 1 of 2
Boron (mg/L)	MW-18	0.06507	n/a	11/19/2018	0.05ND	No	77	10.39	No	0.00188	Param Inter 1 of 2
Boron (mg/L)	MW-19	0.06507	n/a	11/20/2018	0.05ND	No	77	10.39	No	0.00188	Param Inter 1 of 2
<b>Boron (mg/L)</b>	<b>MW-20</b>	<b>0.06507</b>	<b>n/a</b>	<b>11/20/2018</b>	<b>0.114</b>	<b>Yes</b>	<b>77</b>	<b>10.39</b>	<b>No</b>	<b>0.00188</b>	<b>Param Inter 1 of 2</b>
pH (SU)	MW-16	6.5	3.77	11/19/2018	6.44	No	84	0	n/a	0.00055	NP Inter (normality) ...
<b>pH (SU)</b>	<b>MW-18</b>	<b>6.5</b>	<b>3.77</b>	<b>11/19/2018</b>	<b>6.54</b>	<b>Yes</b>	<b>84</b>	<b>0</b>	<b>n/a</b>	<b>0.00055</b>	<b>NP Inter (normality) ...</b>
pH (SU)	MW-19	6.5	3.77	11/20/2018	6.16	No	84	0	n/a	0.00055	NP Inter (normality) ...
<b>pH (SU)</b>	<b>MW-20</b>	<b>6.5</b>	<b>3.77</b>	<b>11/20/2018</b>	<b>6.81</b>	<b>Yes</b>	<b>84</b>	<b>0</b>	<b>n/a</b>	<b>0.00055</b>	<b>NP Inter (normality) ...</b>

Exceeds Limit: MW-20

Prediction Limit  
 Interwell Parametric

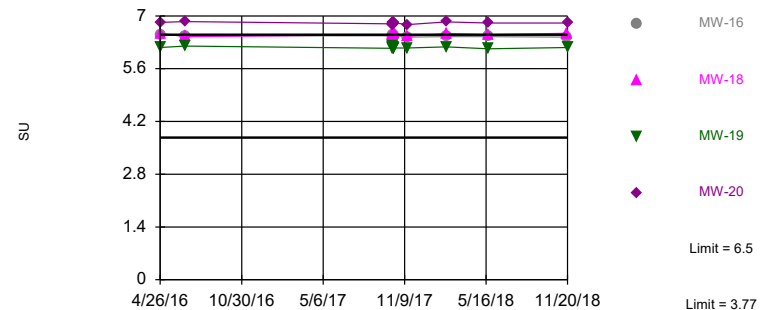


Background Data Summary: Mean=0.04352, Std. Dev.=0.01221, n=77, 10.39% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9573, critical = 0.957. Kappa = 1.765 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

Constituent: Boron Analysis Run 1/9/2019 1:28 PM View: PL's - Interwell  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Exceeds Limits: MW-18, MW-20

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 84 background values. Annual per-constituent alpha = 0.004396. Individual comparison alpha = 0.00055 (1 of 2). Comparing 4 points to limit.

Constituent: pH Analysis Run 1/9/2019 1:28 PM View: PL's - Interwell  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

# Intrawell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/9/2019, 1:33 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Chloride (mg/L)	MW-20	7.306	n/a	11/20/2018	43	Yes	8	0	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-1	2298	n/a	11/19/2018	2360	Yes	8	0	No	0.00188	Param Intra 1 of 2

# Intrawell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/9/2019, 1:33 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Calcium (mg/L)	MW-1	160.7	n/a	11/19/2018	154	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-2	223.4	n/a	11/19/2018	221	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-3	459.2	n/a	11/19/2018	387	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-4	433.2	n/a	11/19/2018	289	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-13	362.8	n/a	11/19/2018	288	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-14	369.2	n/a	11/19/2018	323	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-15	289.7	n/a	11/19/2018	272	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-16	334.2	n/a	11/19/2018	301	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-18	366.2	n/a	11/19/2018	356	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-19	419	n/a	11/20/2018	325	No	8	0	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-20	395.1	n/a	11/20/2018	349	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-1	3.012	n/a	11/19/2018	1ND	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-2	5.083	n/a	11/19/2018	3	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-3	2.081	n/a	11/19/2018	1ND	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-4	2.668	n/a	11/19/2018	1ND	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-13	2.9	n/a	11/19/2018	1ND	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-14	2.67	n/a	11/19/2018	1ND	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-15	2.233	n/a	11/19/2018	1ND	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-16	5.139	n/a	11/19/2018	3.7	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-18	2.777	n/a	11/19/2018	1ND	No	8	0	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-19	3.323	n/a	11/20/2018	1ND	No	8	0	No	0.00188	Param Intra 1 of 2
<b>Chloride (mg/L)</b>	<b>MW-20</b>	<b>7.306</b>	<b>n/a</b>	<b>11/20/2018</b>	<b>43</b>	<b>Yes</b>	<b>8</b>	<b>0</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	MW-1	0.2045	n/a	11/19/2018	0.15	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.2246	n/a	11/19/2018	0.18	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-3	0.5008	n/a	11/19/2018	0.31	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-4	0.4638	n/a	11/19/2018	0.36	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-13	0.235	n/a	11/19/2018	0.2	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-14	0.2785	n/a	11/19/2018	0.25	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-15	0.3908	n/a	11/19/2018	0.34	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-16	0.1894	n/a	11/19/2018	0.17	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-18	0.3371	n/a	11/19/2018	0.3	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-19	0.3547	n/a	11/20/2018	0.28	No	8	0	No	0.00188	Param Intra 1 of 2
Fluoride (mg/L)	MW-20	0.1473	n/a	11/20/2018	0.12	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-1	1568	n/a	11/19/2018	1300	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-2	1404	n/a	11/19/2018	1000	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3586	n/a	11/19/2018	3000	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3261	n/a	11/19/2018	2400	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-13	2421	n/a	11/19/2018	1800	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-14	2292	n/a	11/19/2018	1900	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-15	1829	n/a	11/19/2018	1500	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-16	1382	n/a	11/19/2018	1200	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-18	2099	n/a	11/19/2018	1800	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-19	2476	n/a	11/20/2018	1700	No	8	0	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-20	1800	n/a	11/20/2018	1500	No	8	0	No	0.00188	Param Intra 1 of 2
<b>Total Dissolved Solids (mg/L)</b>	<b>MW-1</b>	<b>2298</b>	<b>n/a</b>	<b>11/19/2018</b>	<b>2360</b>	<b>Yes</b>	<b>8</b>	<b>0</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Total Dissolved Solids (mg/L)	MW-2	2221	n/a	11/19/2018	1990	No	8	0	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	4888	n/a	11/19/2018	4710	No	8	0	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-4	4716	n/a	11/19/2018	3920	No	8	0	x^2	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-13	3748	n/a	11/19/2018	2960	No	8	0	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-14	3543	n/a	11/19/2018	3270	No	8	0	No	0.00188	Param Intra 1 of 2

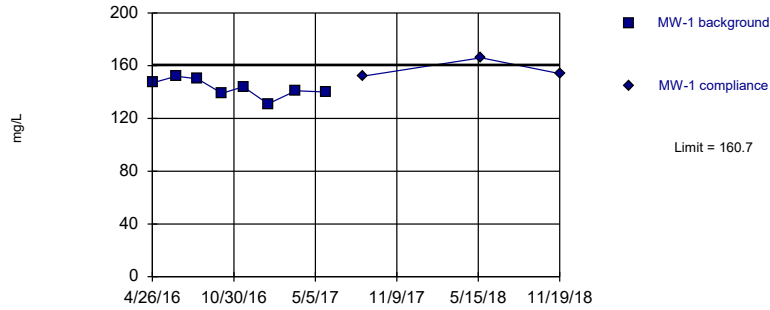


# Intrawell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/9/2019, 1:33 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Total Dissolved Solids (mg/L)	MW-15	2756	n/a	11/19/2018	2630	No	8	0	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-16	2570	n/a	11/19/2018	2420	No	8	0	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-18	3466	n/a	11/19/2018	3260	No	8	0	x^5	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-19	4378	n/a	11/20/2018	2580	No	8	0	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-20	2811	n/a	11/20/2018	2420	No	8	0	No	0.00188	Param Intra 1 of 2

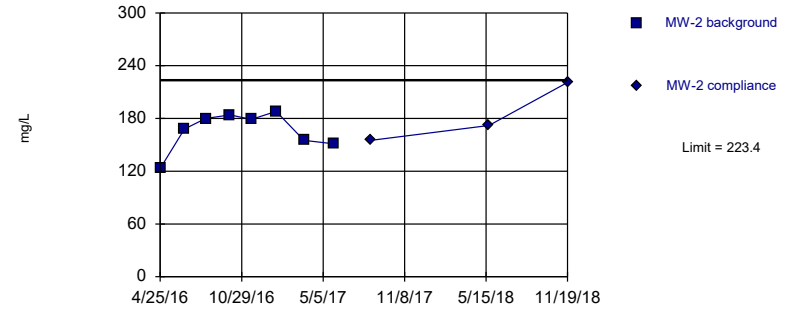
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=143, Std. Dev.=6.761, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9656, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:30 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

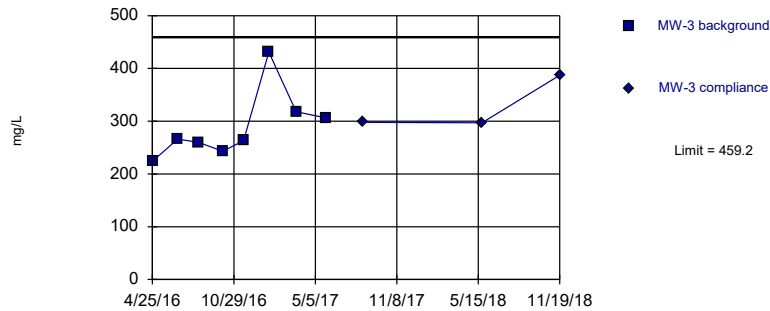
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=166, Std. Dev.=21.95, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8891, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:30 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

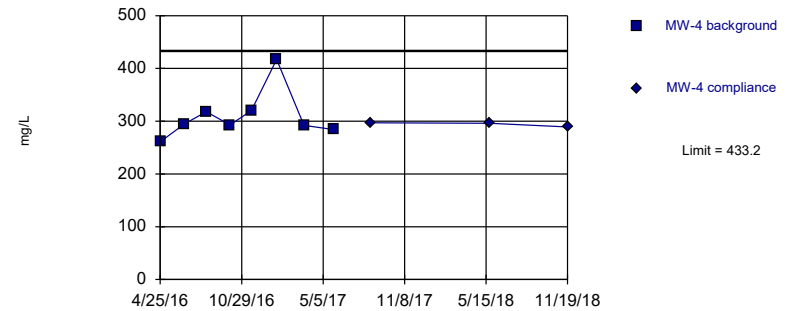
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=288.9, Std. Dev.=65.12, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8325, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:30 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit Prediction Limit  
Intrawell Parametric

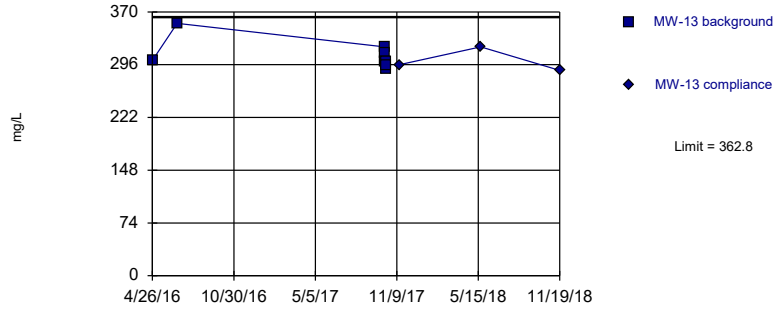


Background Data Summary: Mean=310, Std. Dev.=47.1, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7856, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:30 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

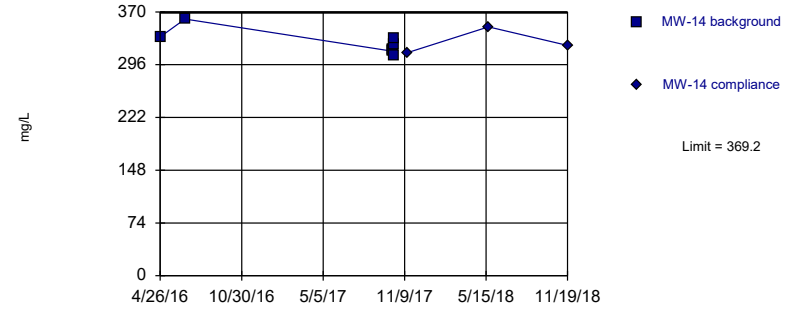


Background Data Summary: Mean=309.4, Std. Dev.=20.42, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8177, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:30 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

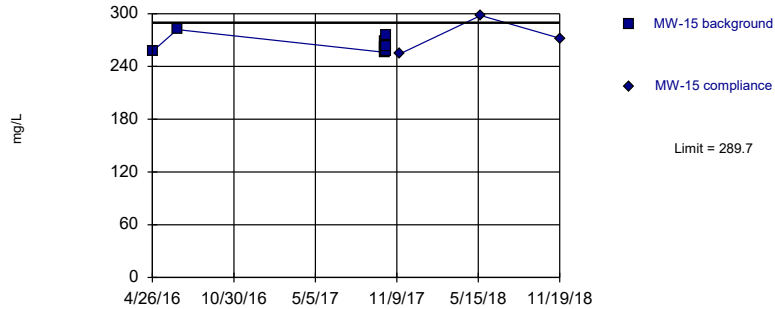


Background Data Summary: Mean=326.1, Std. Dev.=16.47, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8758, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:30 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

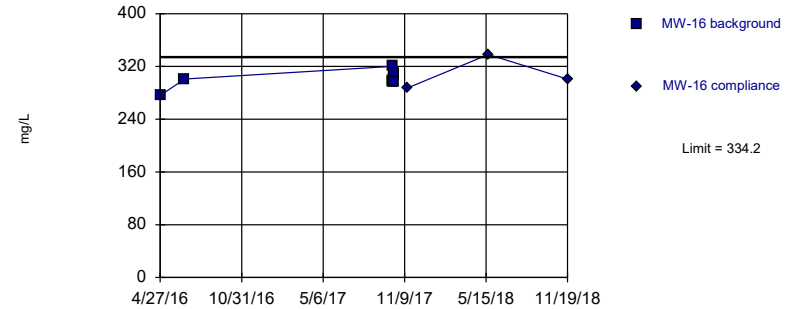


Background Data Summary: Mean=265.3, Std. Dev.=9.347, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8957, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:30 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

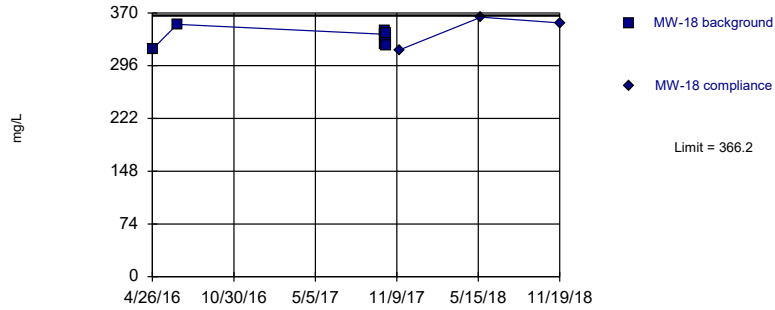


Background Data Summary: Mean=300.9, Std. Dev.=12.76, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.933, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

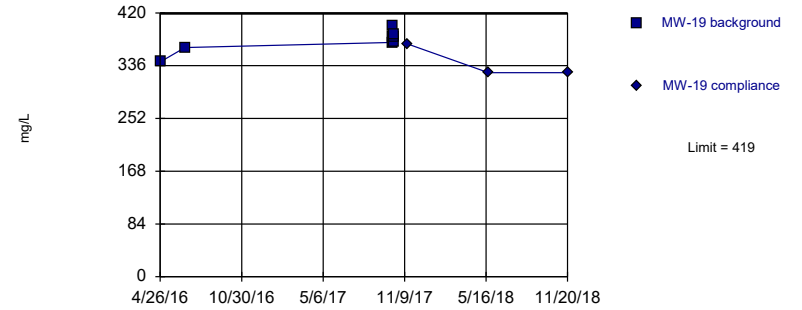


Background Data Summary: Mean=334.6, Std. Dev.=12.08, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9316, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

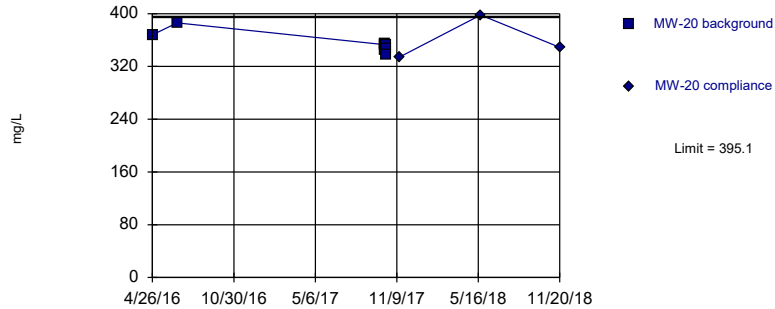


Background Data Summary: Mean=375.3, Std. Dev.=16.74, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.937, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

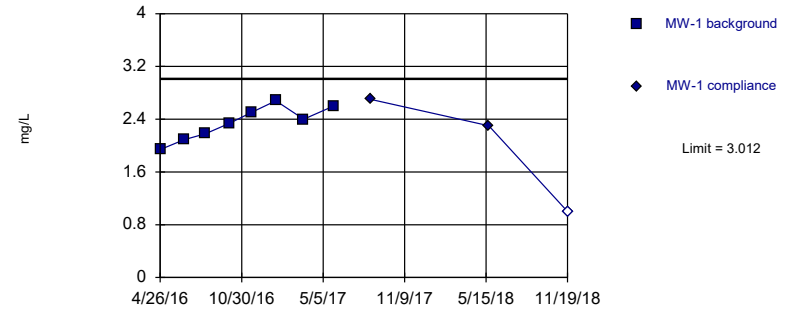


Background Data Summary: Mean=355.5, Std. Dev.=15.15, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8914, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

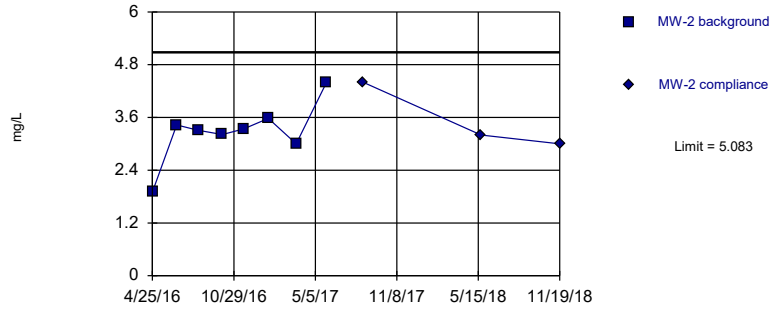


Background Data Summary: Mean=2.341, Std. Dev.=0.2565, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9701, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

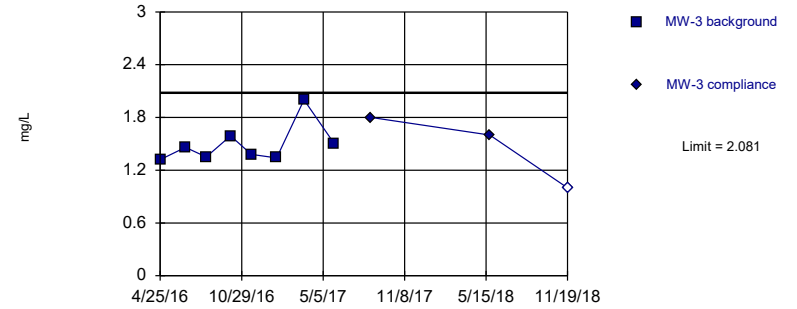


Background Data Summary: Mean=3.271, Std. Dev.=0.6927, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8979, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

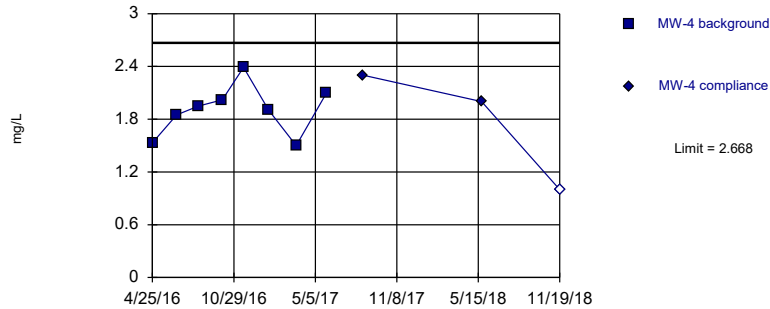


Background Data Summary: Mean=1.493, Std. Dev.=0.2249, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7672, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

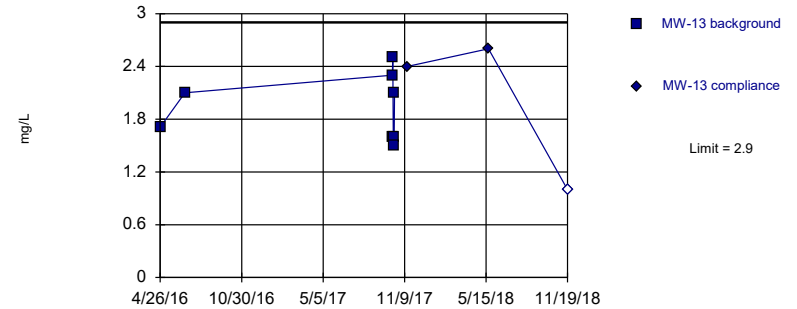


Background Data Summary: Mean=1.905, Std. Dev.=0.2918, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.947, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

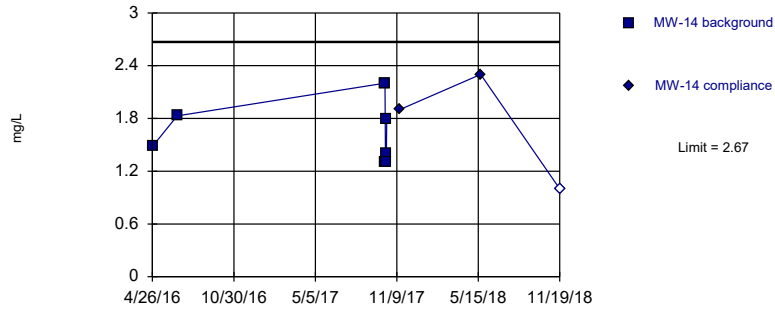


Background Data Summary: Mean=1.926, Std. Dev.=0.3724, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9021, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

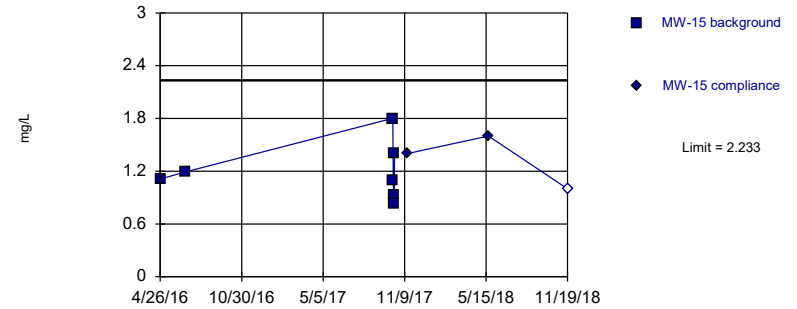


Background Data Summary: Mean=1.689, Std. Dev.=0.375, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8643, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

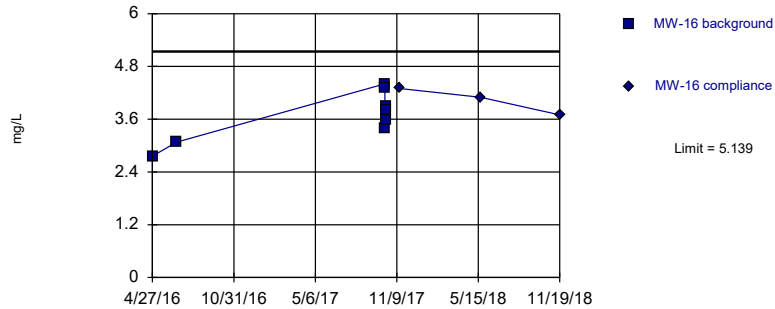


Background Data Summary: Mean=1.27, Std. Dev.=0.3682, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8903, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

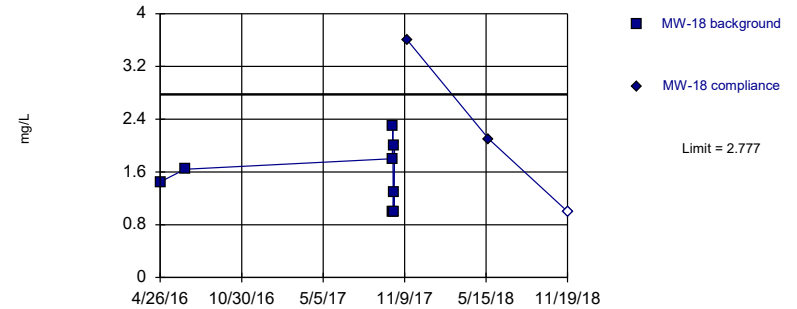


Background Data Summary: Mean=3.655, Std. Dev.=0.5672, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9687, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

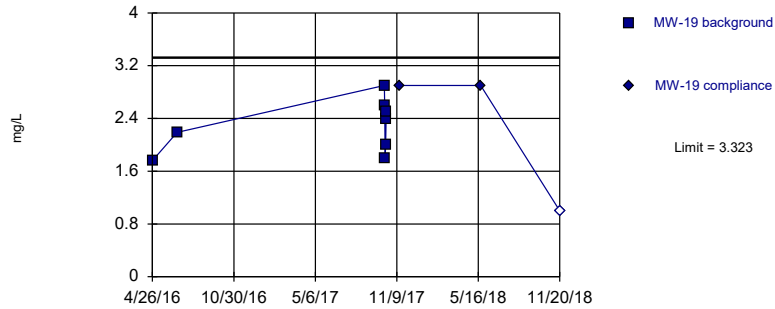


Background Data Summary: Mean=1.561, Std. Dev.=0.4648, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9539, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

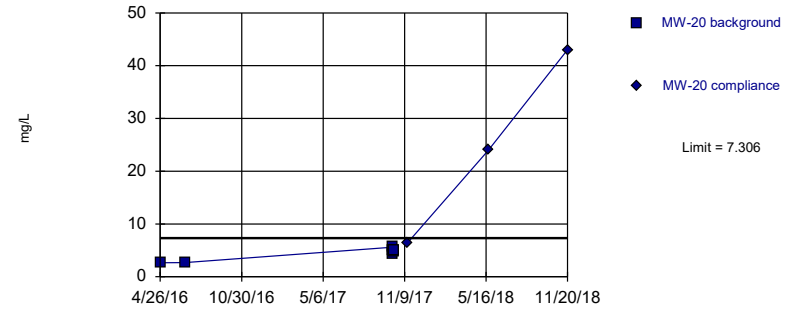


Background Data Summary: Mean=2.269, Std. Dev.=0.4028, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9558, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Exceeds Limit

Prediction Limit  
Intrawell Parametric

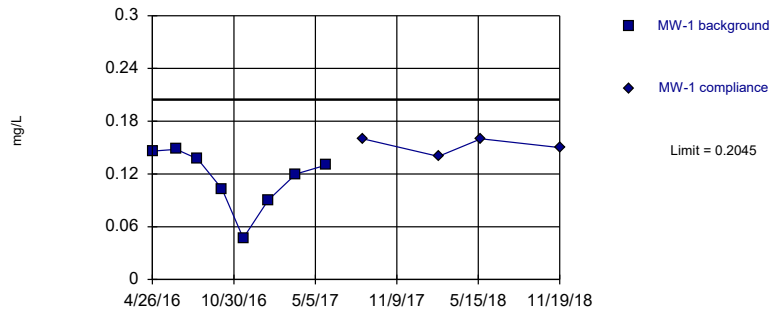


Background Data Summary: Mean=4.393, Std. Dev.=1.114, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8117, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

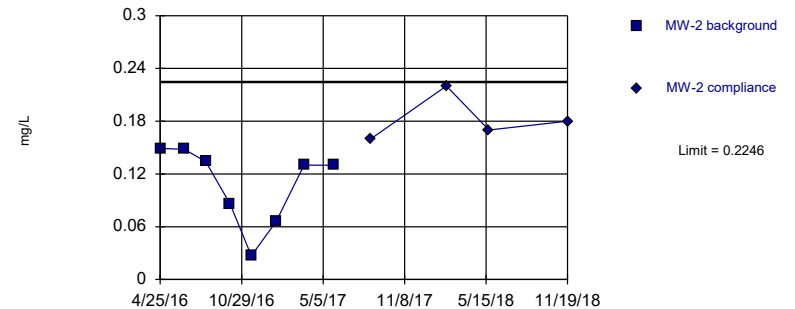


Background Data Summary: Mean=0.1151, Std. Dev.=0.03418, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8905, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

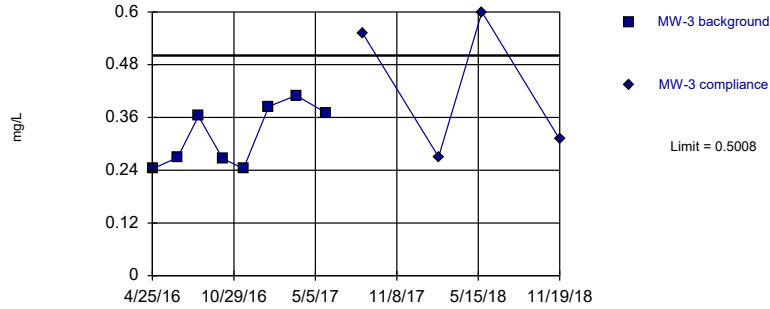


Background Data Summary: Mean=0.1088, Std. Dev.=0.04429, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8518, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

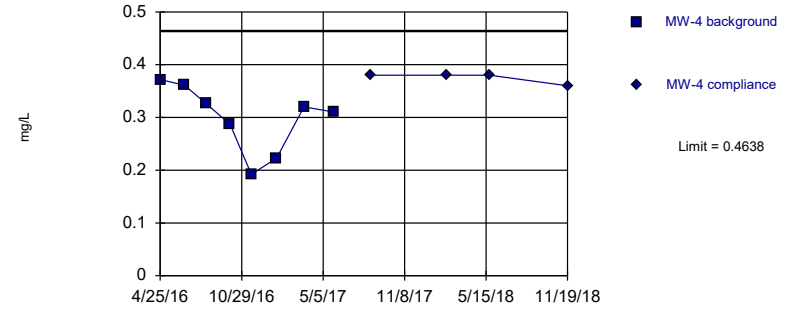


Background Data Summary: Mean=0.3188, Std. Dev.=0.06957, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8437, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

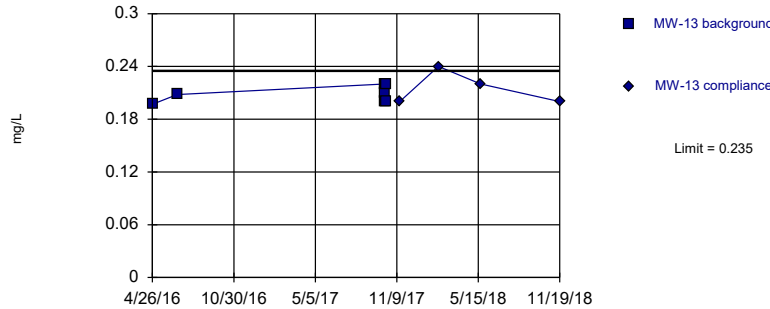


Background Data Summary: Mean=0.2989, Std. Dev.=0.06306, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9193, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

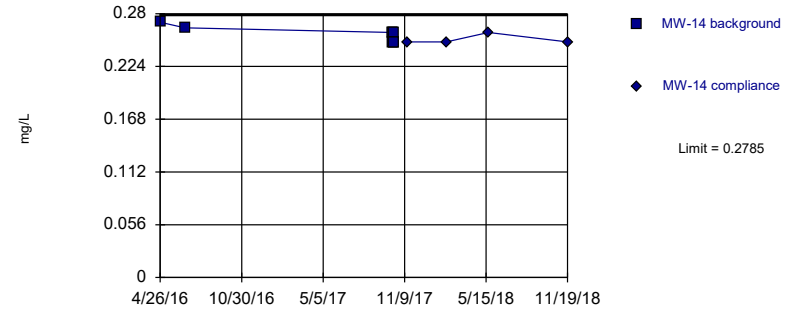


Background Data Summary: Mean=0.2094, Std. Dev.=0.009782, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8488, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric



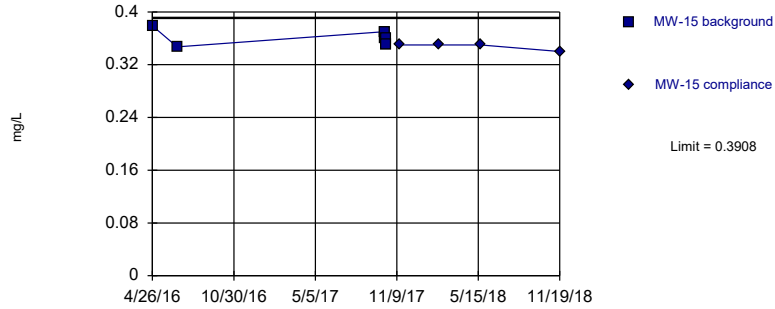
Background Data Summary: Mean=0.2583, Std. Dev.=0.00776, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8744, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill



Within Limit

### Prediction Limit Intrawell Parametric

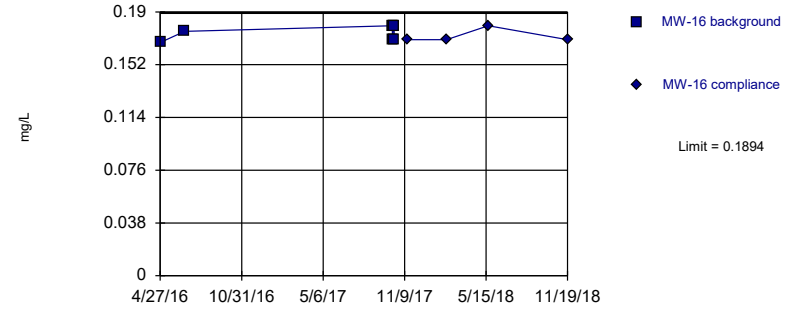


Background Data Summary: Mean=0.3608, Std. Dev.=0.0115, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.92, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

### Prediction Limit Intrawell Parametric

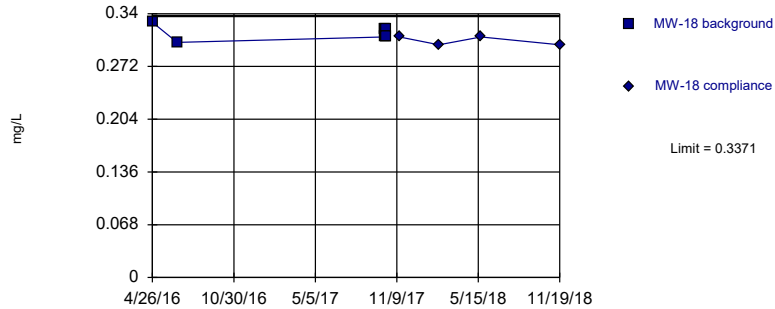


Background Data Summary: Mean=0.1755, Std. Dev.=0.005318, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7758, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

### Prediction Limit Intrawell Parametric

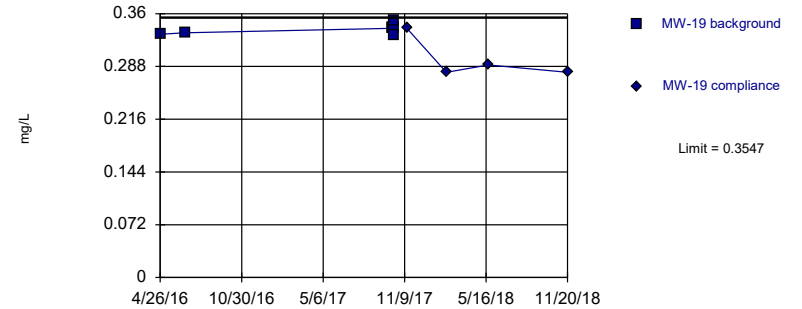


Background Data Summary: Mean=0.3153, Std. Dev.=0.008362, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9184, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

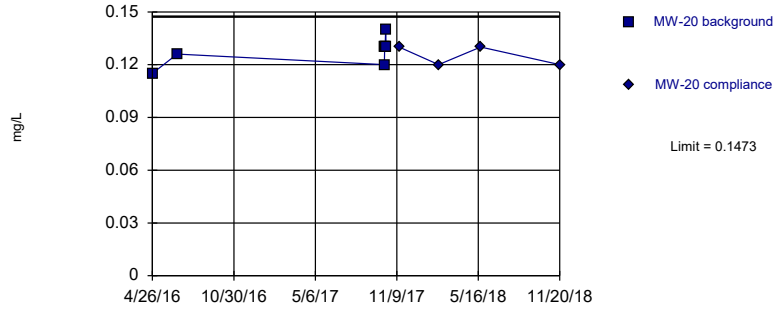
### Prediction Limit Intrawell Parametric



Background Data Summary: Mean=0.3383, Std. Dev.=0.006274, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8925, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

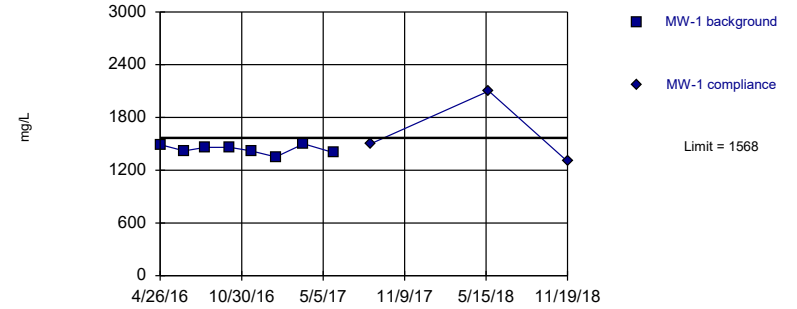
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=0.1276, Std. Dev.=0.00752, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9111, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

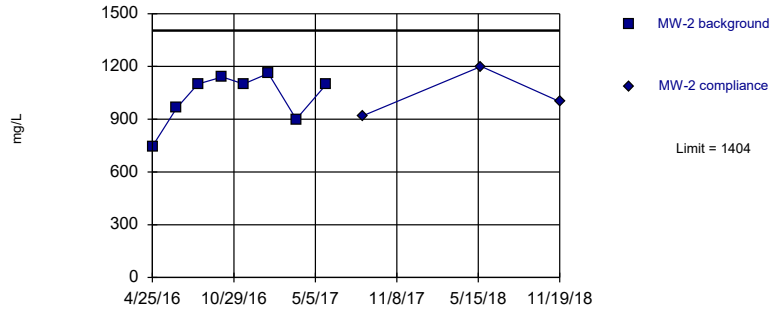
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=1438, Std. Dev.=49.79, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9513, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

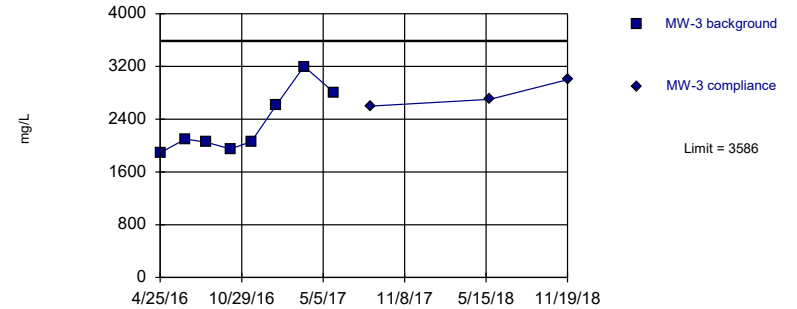
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=1026, Std. Dev.=144.5, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8425, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit Prediction Limit  
Intrawell Parametric

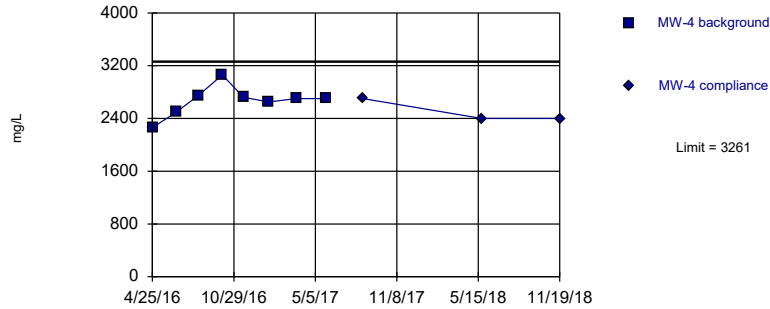


Background Data Summary: Mean=2334, Std. Dev.=478.7, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8438, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

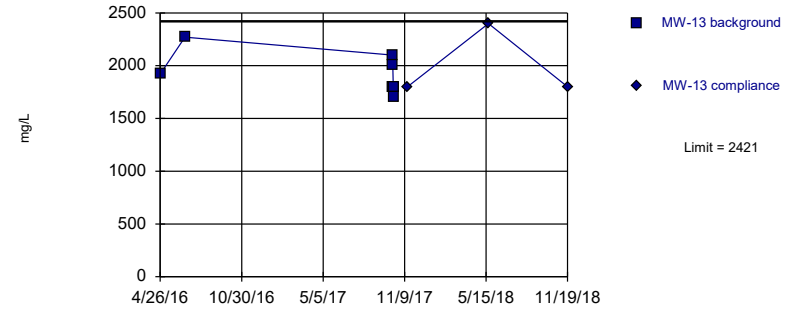


Background Data Summary: Mean=2668, Std. Dev.=226.8, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9195, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

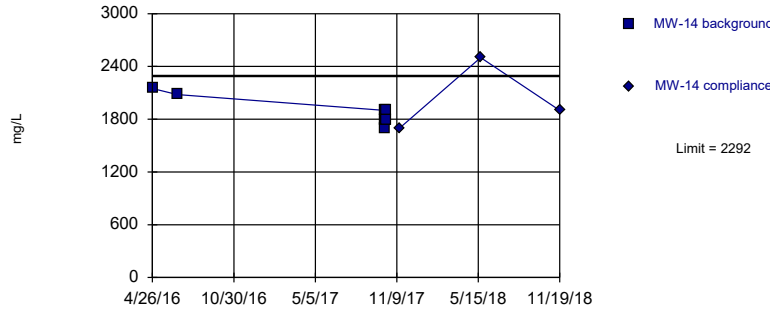


Background Data Summary: Mean=1924, Std. Dev.=190, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9171, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

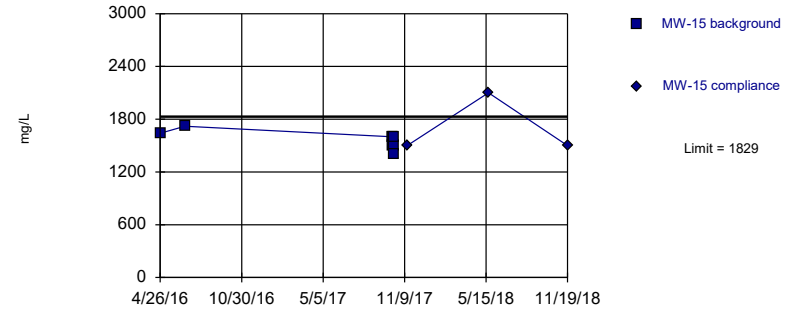


Background Data Summary: Mean=1891, Std. Dev.=153.2, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8974, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

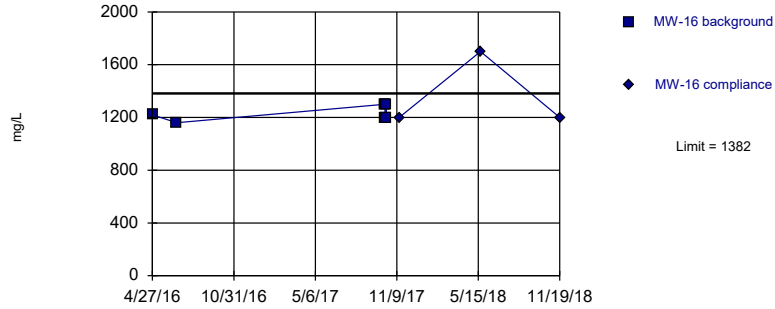


Background Data Summary: Mean=1570, Std. Dev.=99.14, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.948, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

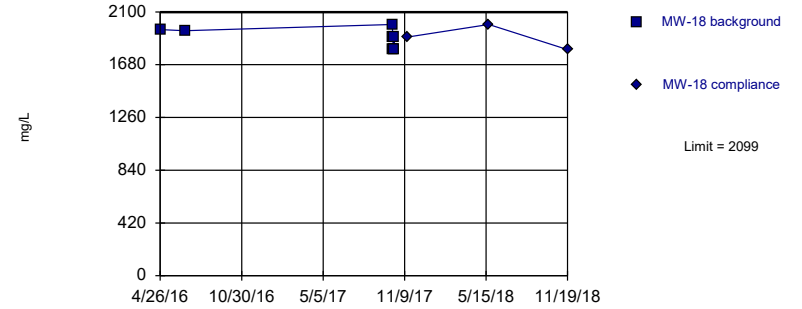


Background Data Summary: Mean=1235, Std. Dev.=56.32, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.82, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

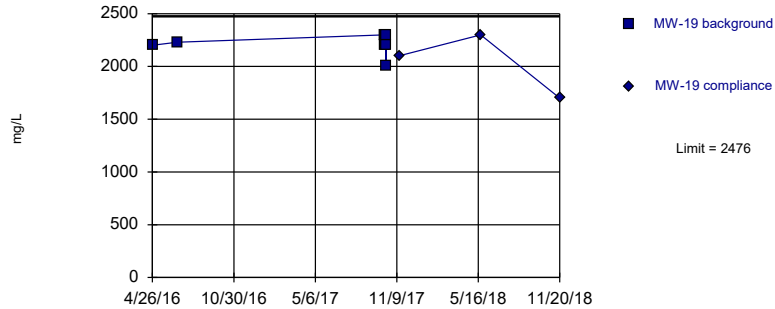


Background Data Summary: Mean=1889, Std. Dev.=80.26, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8678, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

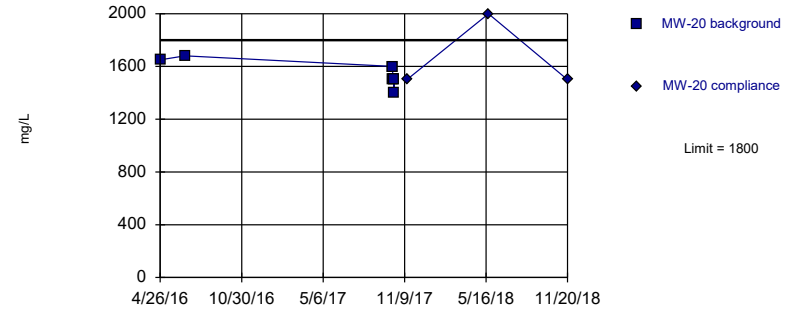


Background Data Summary: Mean=2216, Std. Dev.=99.13, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7846, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

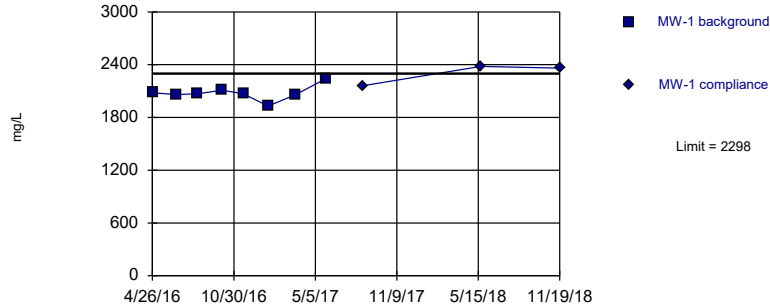


Background Data Summary: Mean=1554, Std. Dev.=93.95, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9319, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 1/9/2019 1:31 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

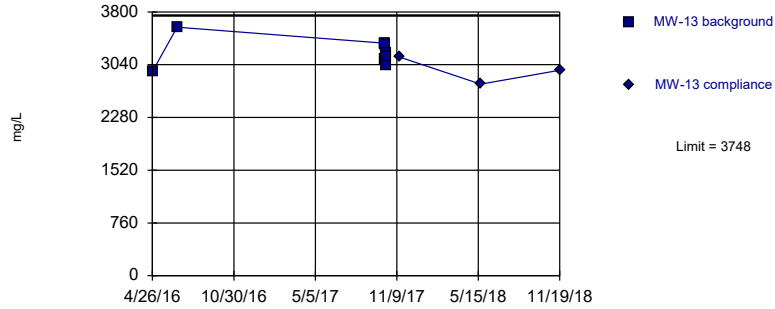
Exceeds Limit

Prediction Limit  
Intrawell Parametric



Within Limit

Prediction Limit  
Intrawell Parametric

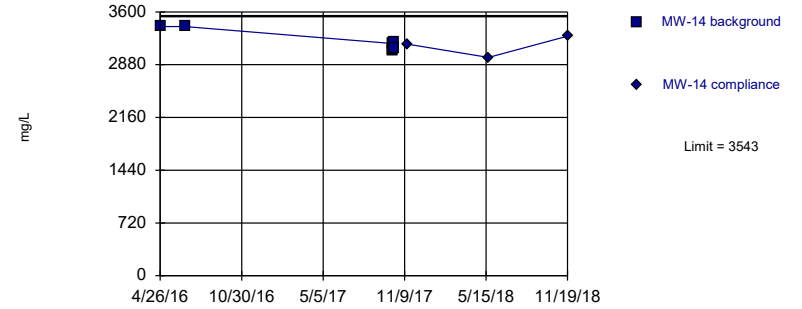


Background Data Summary: Mean=3215, Std. Dev.=203.6, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.969, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:32 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

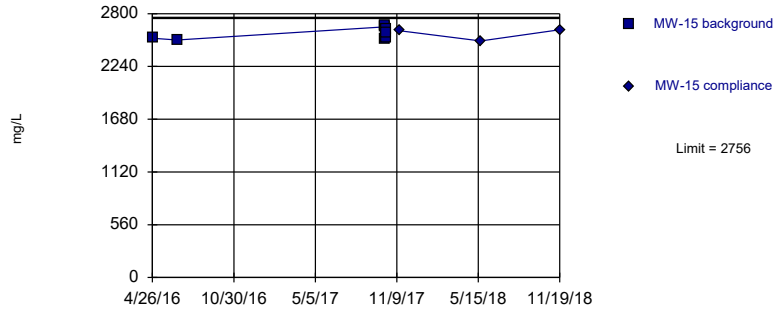


Background Data Summary: Mean=3193, Std. Dev.=134, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7896, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:32 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

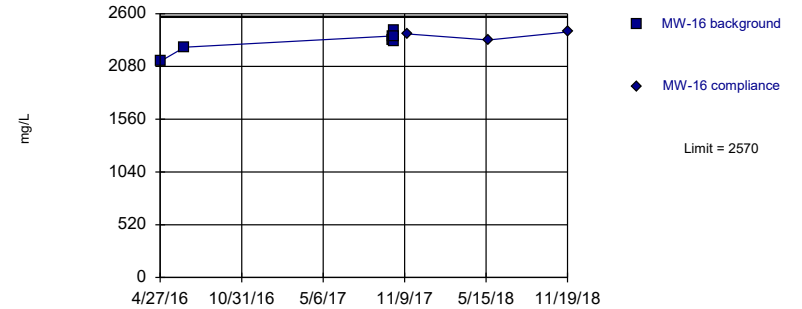


Background Data Summary: Mean=2590, Std. Dev.=63.47, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8875, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:32 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

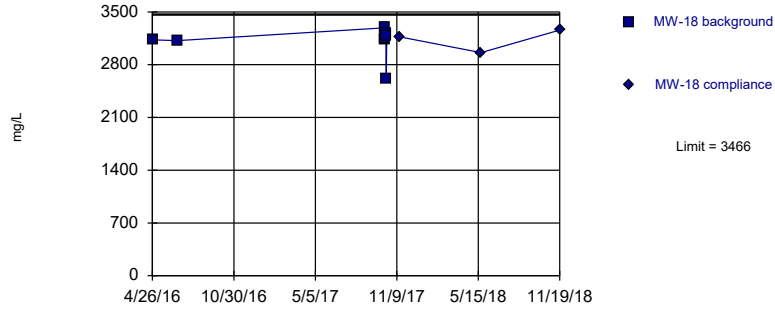


Background Data Summary: Mean=2326, Std. Dev.=93.19, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8788, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:32 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

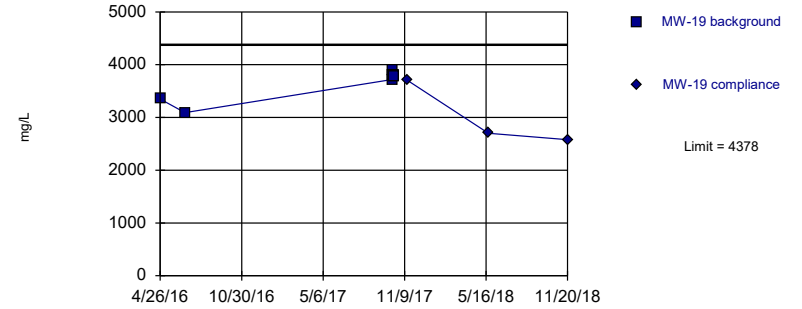


Background Data Summary (based on x^5 transformation): Mean=3.0e17, Std. Dev.=7.7e16, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7668, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:32 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric

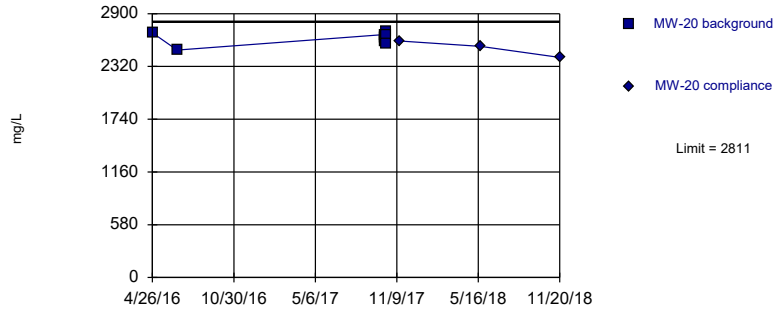


Background Data Summary: Mean=3650, Std. Dev.=278.4, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7576, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:32 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=2629, Std. Dev.=69.58, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9, critical = 0.749. Kappa = 2.616 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:32 PM View: PL's - Intrawell  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

# Trend Test - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/9/2019, 1:36 PM

<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>
<b>Chloride (mg/L)</b>	<b>MW-20</b>	<b>14.38</b>	<b>39</b>	<b>34</b>	<b>Yes</b>	<b>11</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>

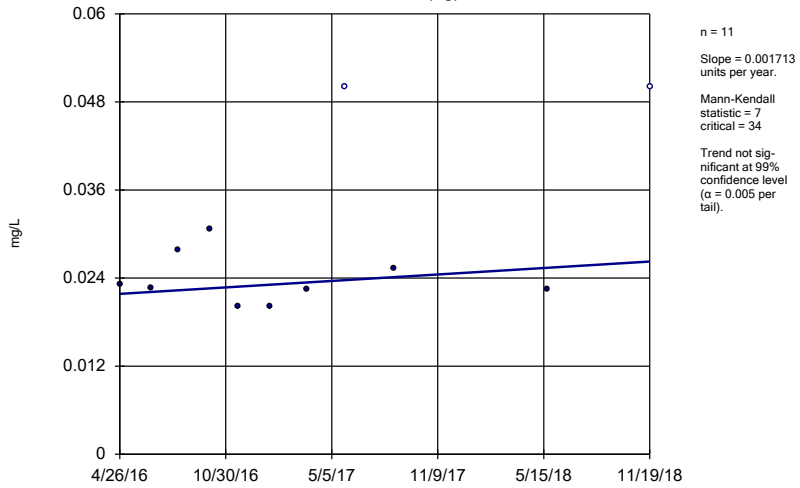


# Trend Test - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/9/2019, 1:36 PM

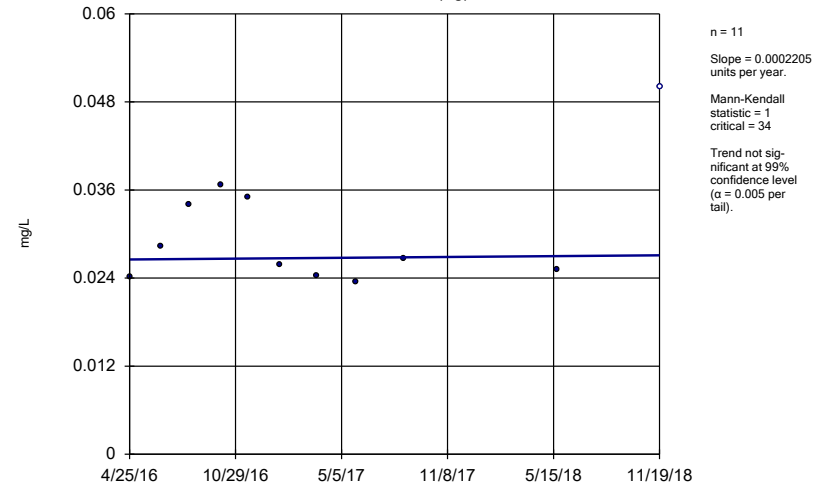
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	MW-1 (Bg)	0.001713	7	34	No	11	18.18	n/a	n/a	0.01	NP
Boron (mg/L)	MW-2 (Bg)	0.000...	1	34	No	11	9.091	n/a	n/a	0.01	NP
Boron (mg/L)	MW-3 (Bg)	0.002825	7	34	No	11	9.091	n/a	n/a	0.01	NP
Boron (mg/L)	MW-4 (Bg)	-0.00...	-1	-34	No	11	9.091	n/a	n/a	0.01	NP
Boron (mg/L)	MW-20	0.001354	12	34	No	11	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-1 (Bg)	0.3971	17	34	No	11	9.091	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-2 (Bg)	0.1714	5	34	No	11	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-3 (Bg)	0.1033	11	34	No	11	9.091	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-4 (Bg)	0.07799	5	34	No	11	9.091	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-20</b>	<b>14.38</b>	<b>39</b>	<b>34</b>	<b>Yes</b>	<b>11</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH (SU)	MW-1 (Bg)	-0.01947	-17	-38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	MW-2 (Bg)	0.05229	16	38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	MW-3 (Bg)	-0.6037	-25	-38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	MW-4 (Bg)	0.003007	4	38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	MW-18	0.006778	9	38	No	12	0	n/a	n/a	0.01	NP
pH (SU)	MW-20	-0.00...	-5	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids...	MW-1 (Bg)	119.5	23	34	No	11	0	n/a	n/a	0.01	NP
Total Dissolved Solids...	MW-2 (Bg)	94.81	6	34	No	11	0	n/a	n/a	0.01	NP
Total Dissolved Solids...	MW-3 (Bg)	728.2	33	34	No	11	0	n/a	n/a	0.01	NP
Total Dissolved Solids...	MW-4 (Bg)	-36.08	-1	-34	No	11	0	n/a	n/a	0.01	NP

### Sen's Slope Estimator MW-1 (Bg)



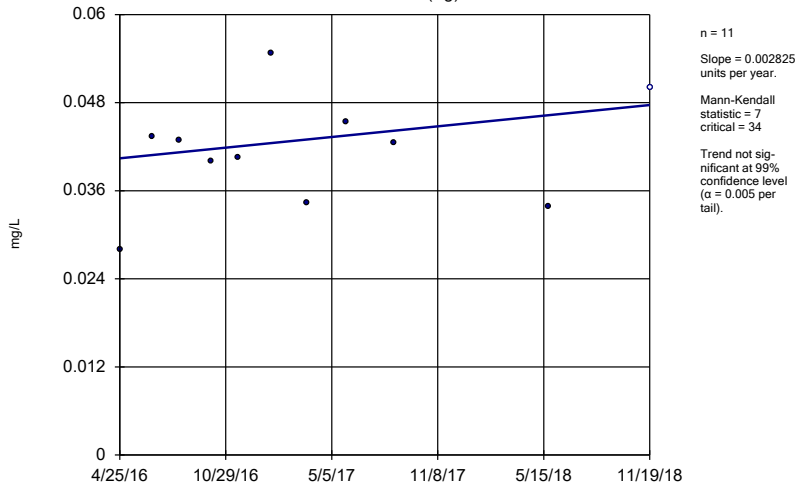
Constituent: Boron Analysis Run 1/9/2019 1:34 PM View: Trend Analyses  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Sen's Slope Estimator MW-2 (Bg)



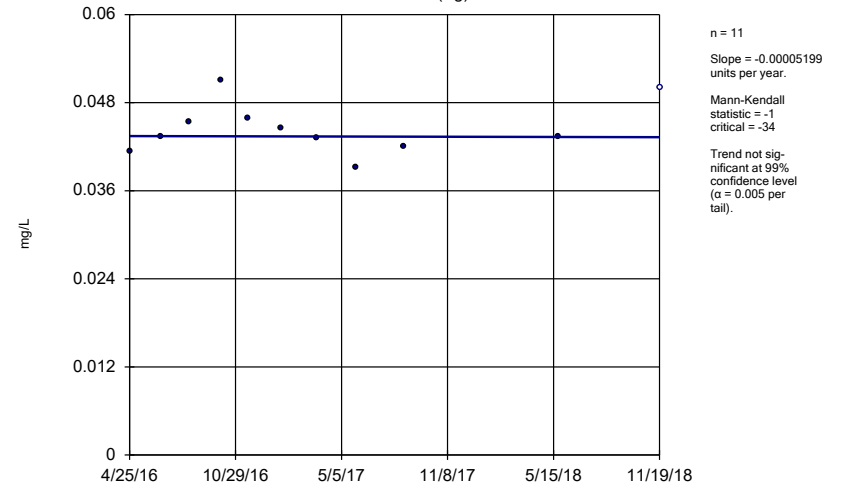
Constituent: Boron Analysis Run 1/9/2019 1:34 PM View: Trend Analyses  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Sen's Slope Estimator MW-3 (Bg)



Constituent: Boron Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

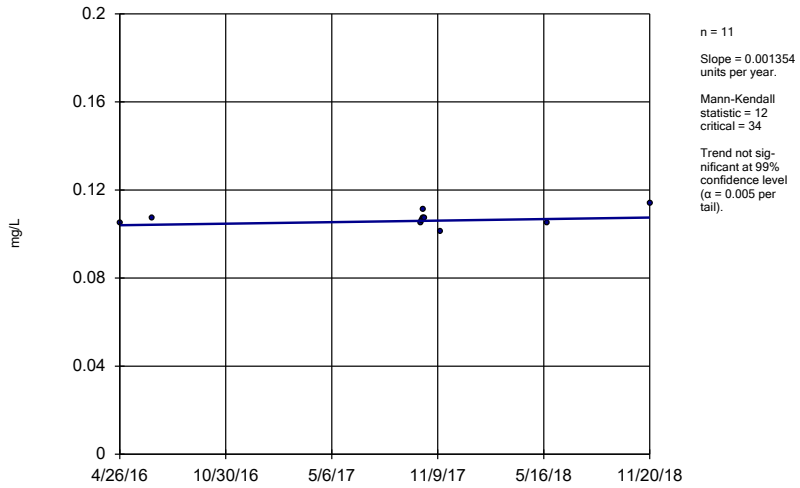
### Sen's Slope Estimator MW-4 (Bg)



Constituent: Boron Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Sen's Slope Estimator

MW-20

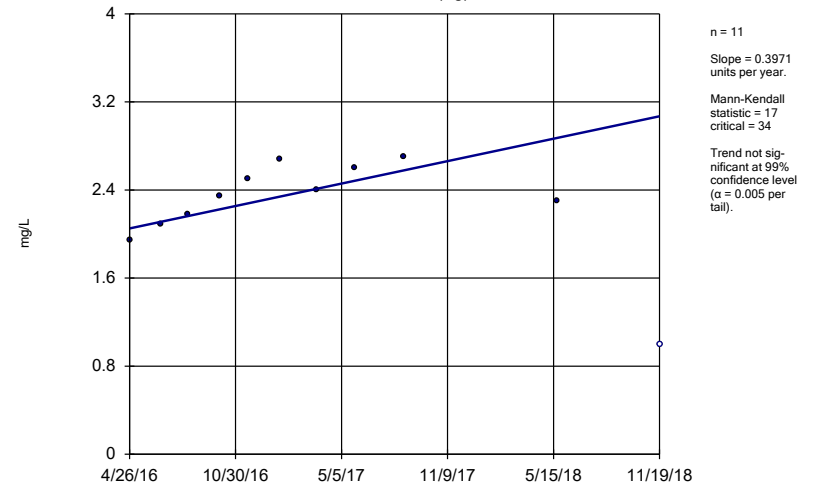


Constituent: Boron Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Hollow symbols indicate censored values.

### Sen's Slope Estimator

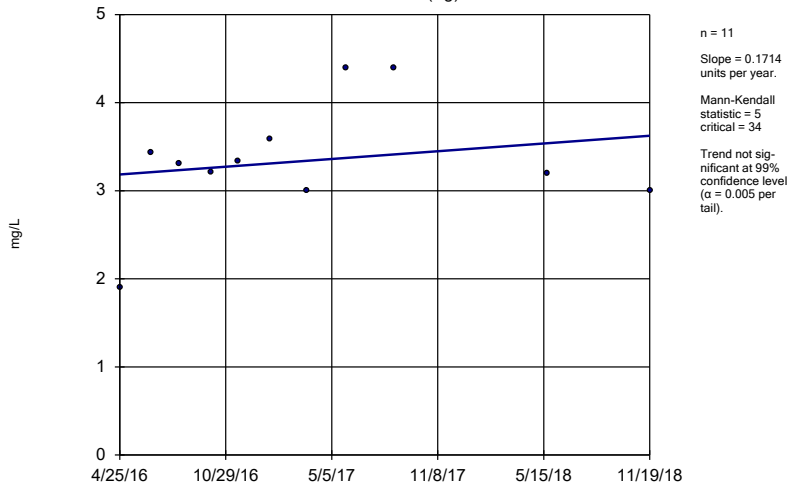
MW-1 (Bg)



Constituent: Chloride Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Sen's Slope Estimator

MW-2 (Bg)

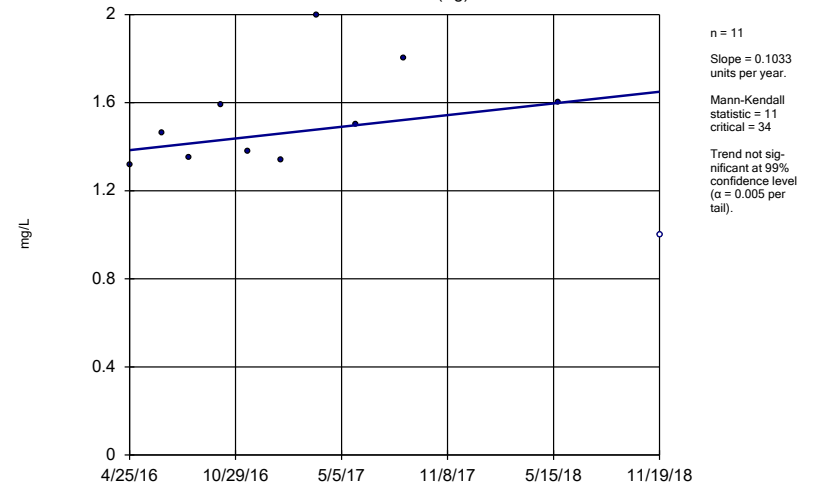


Constituent: Chloride Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Hollow symbols indicate censored values.

### Sen's Slope Estimator

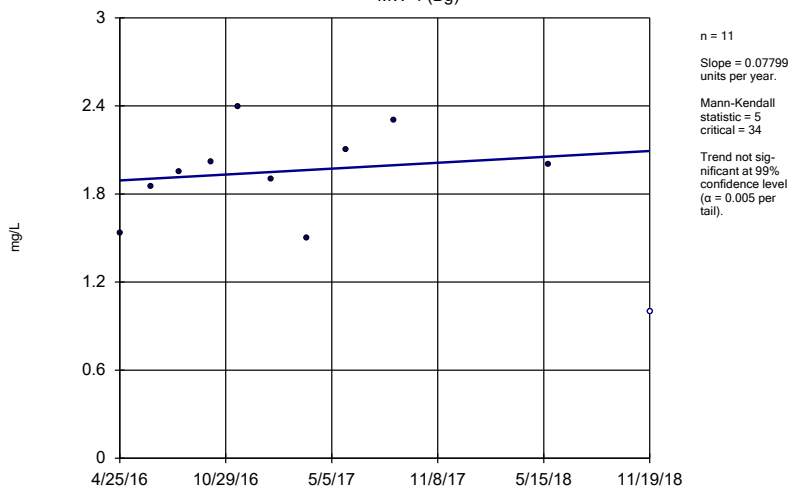
MW-3 (Bg)



Constituent: Chloride Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

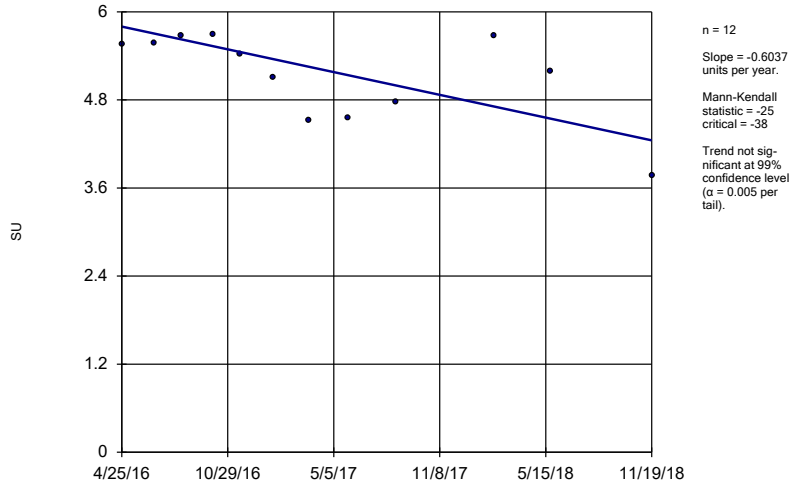
### Sen's Slope Estimator

MW-4 (Bg)



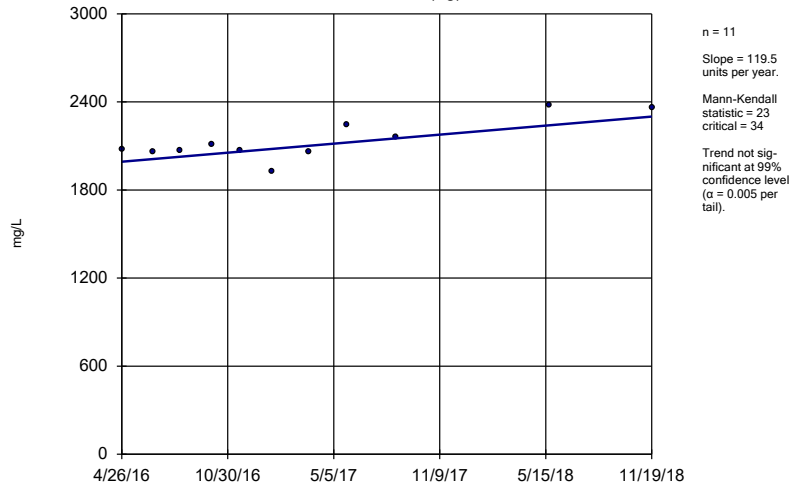
### Sen's Slope Estimator

MW-3 (Bg)



### Sen's Slope Estimator

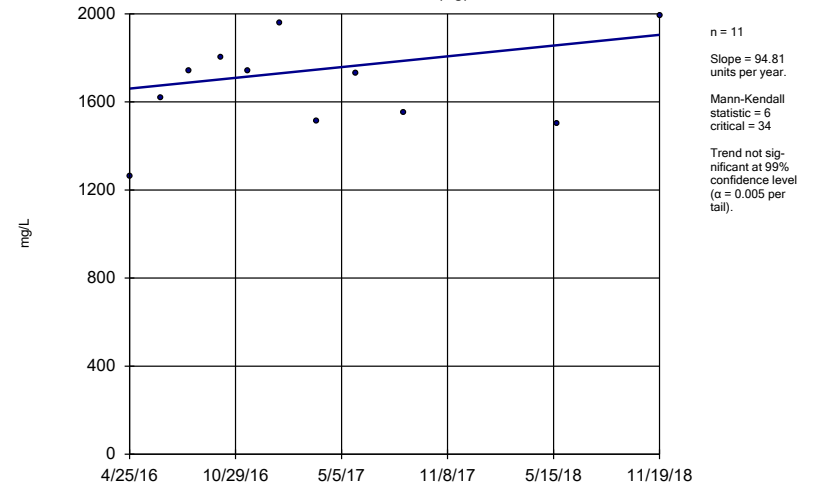
MW-1 (Bg)



Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Sen's Slope Estimator

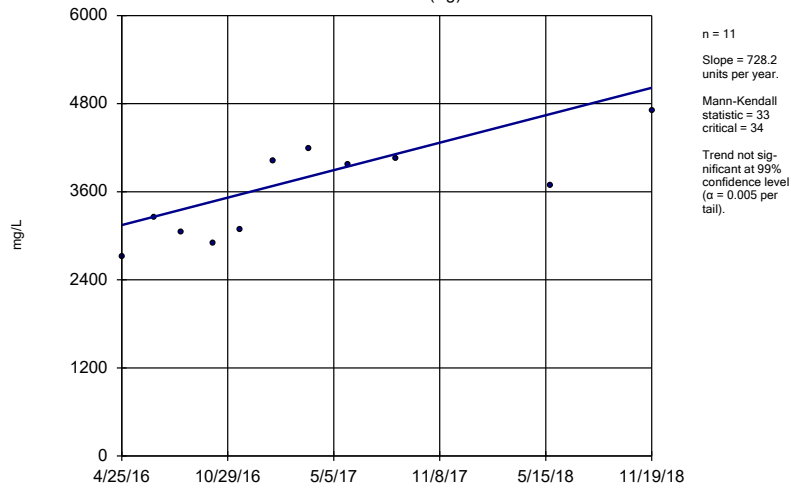
MW-2 (Bg)



Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Sen's Slope Estimator

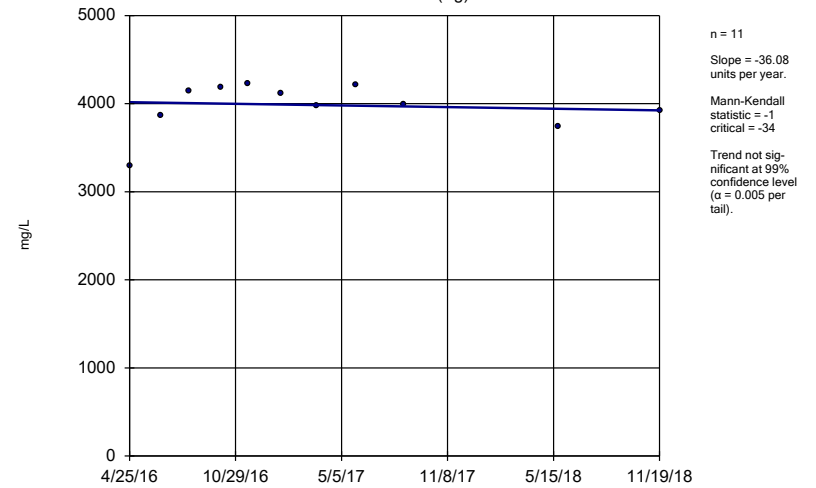
MW-3 (Bg)



Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

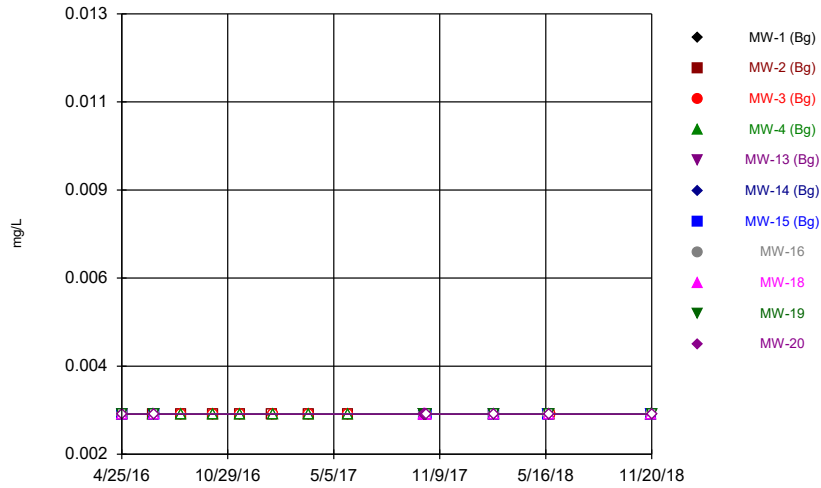
### Sen's Slope Estimator

MW-4 (Bg)



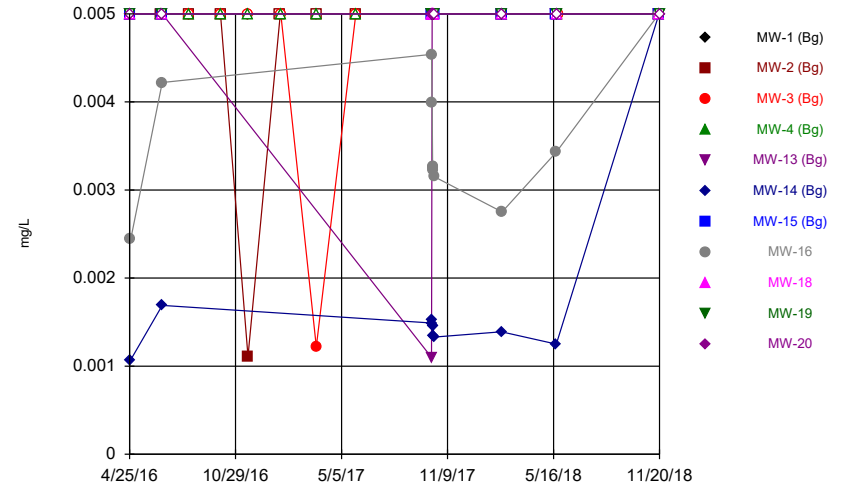
Constituent: Total Dissolved Solids Analysis Run 1/9/2019 1:35 PM View: Trend Analyses  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



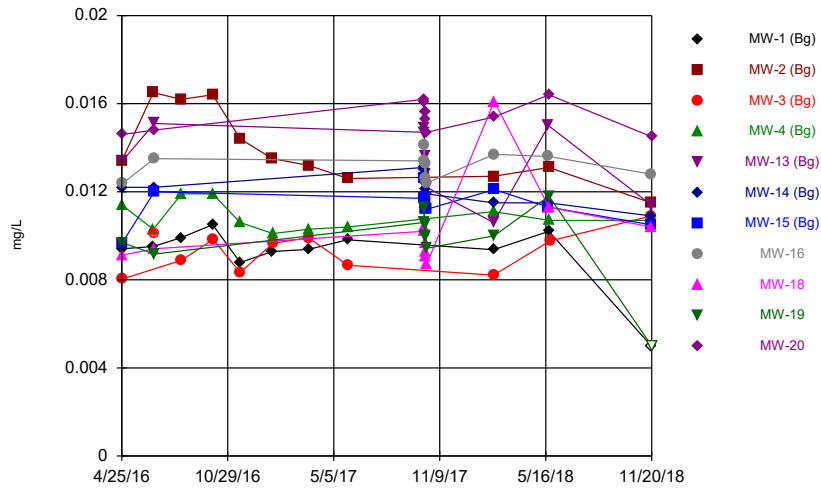
Constituent: Antimony Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



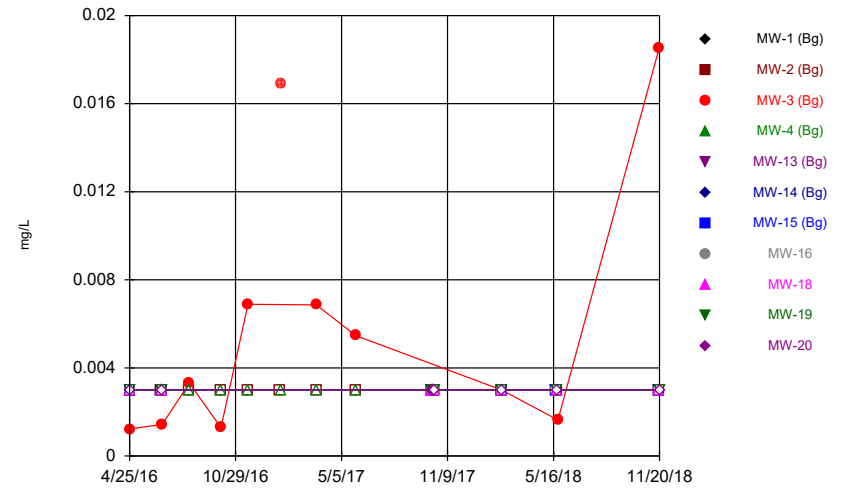
Constituent: Arsenic Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



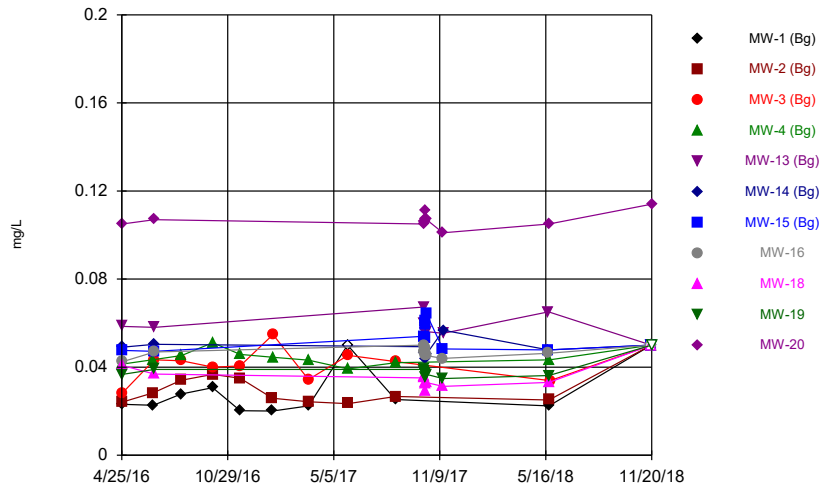
Constituent: Barium Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



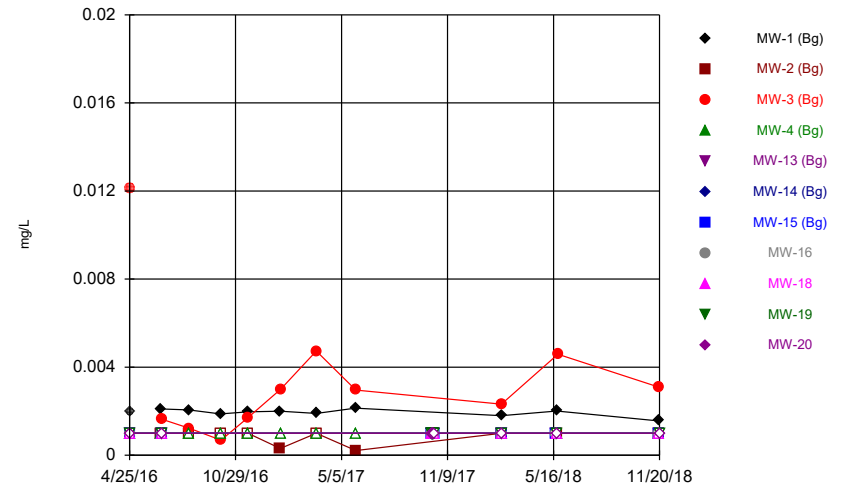
Constituent: Beryllium Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



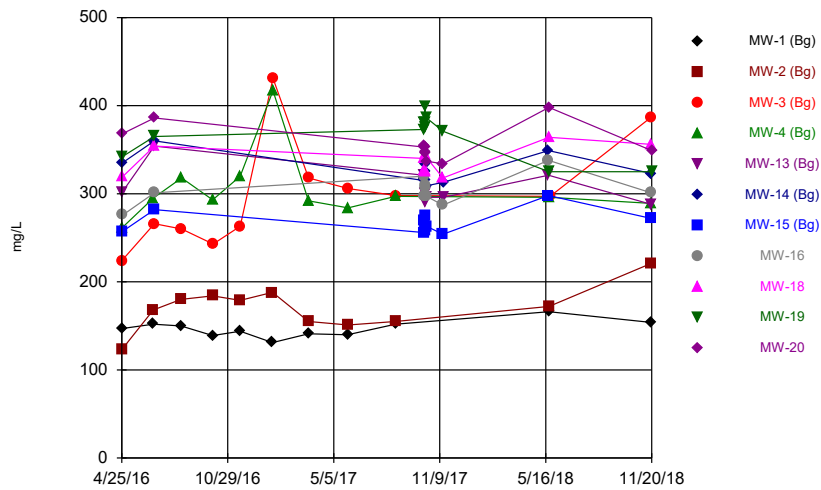
Constituent: Boron Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



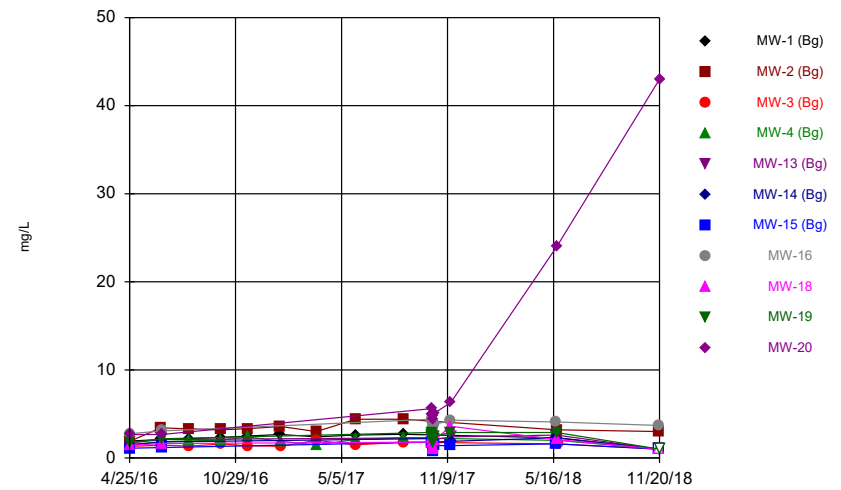
Constituent: Cadmium Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



Constituent: Calcium Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

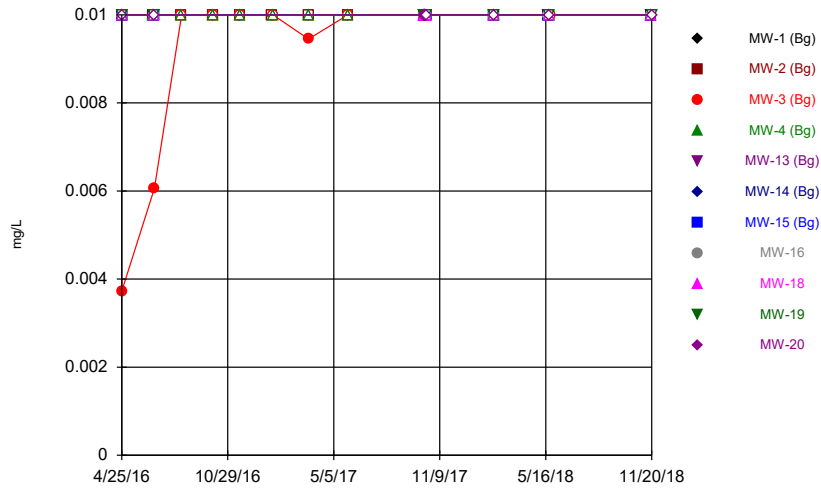
Time Series



Constituent: Chloride Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

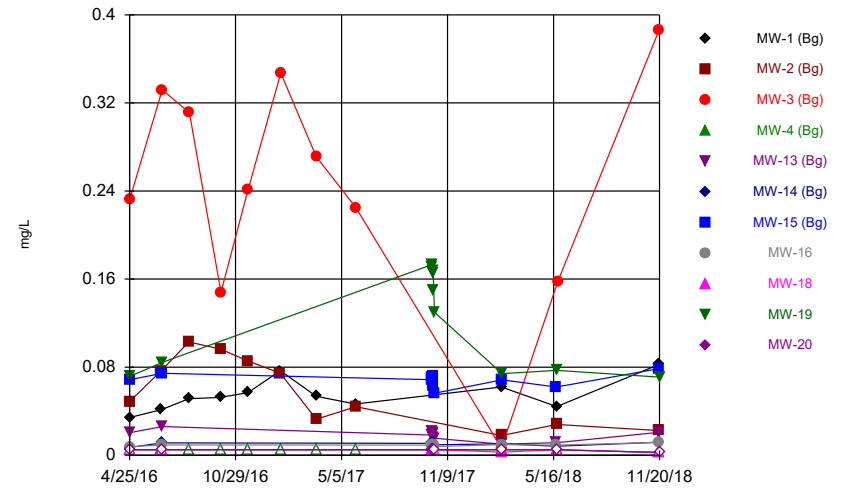


### Time Series



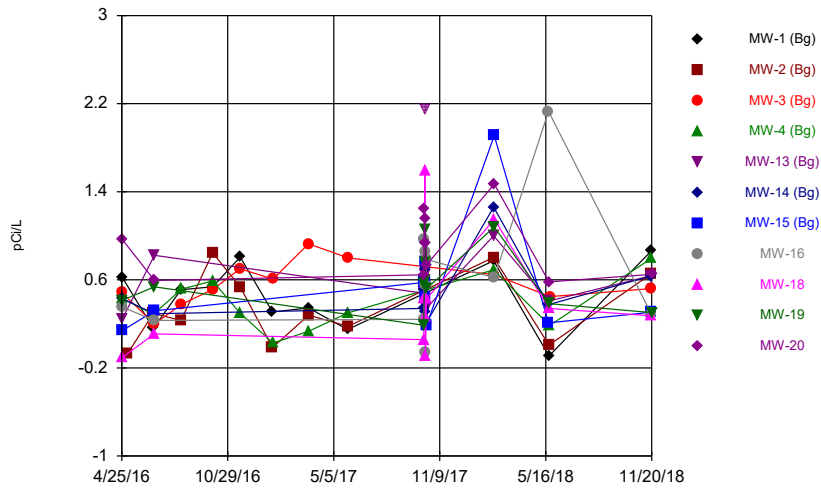
Constituent: Chromium Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Time Series



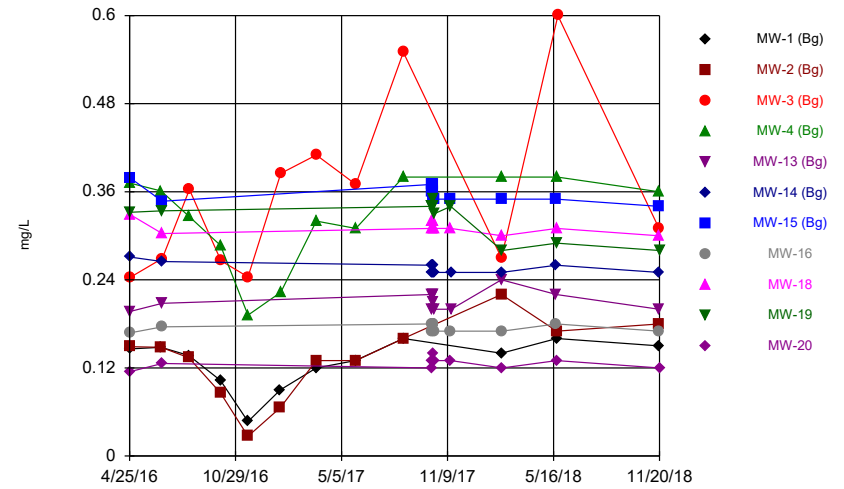
Constituent: Cobalt Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Time Series



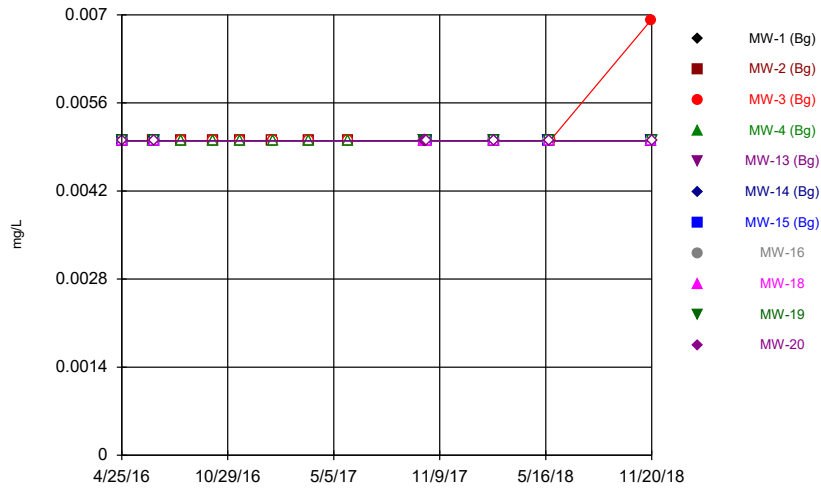
Constituent: Combined Radium 226 + 228 Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Time Series



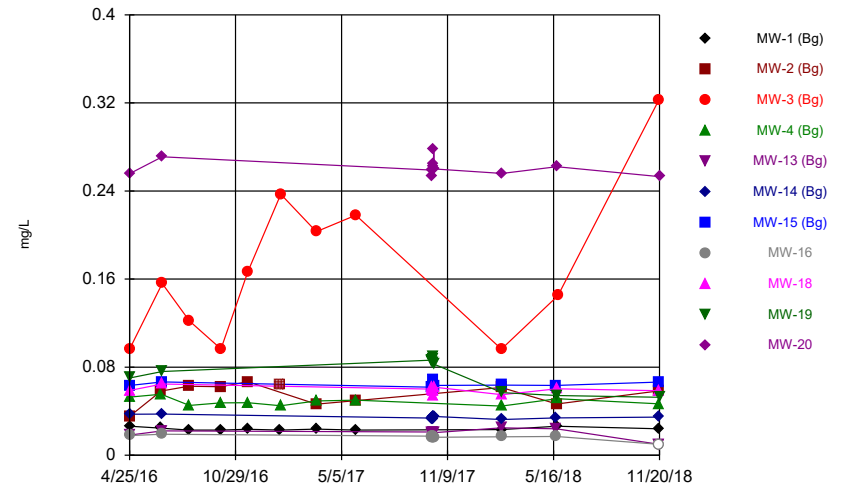
Constituent: Fluoride Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



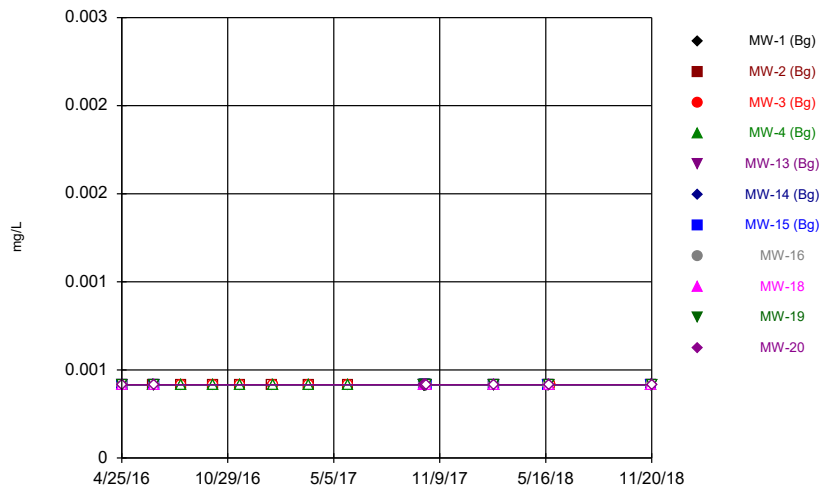
Constituent: Lead Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



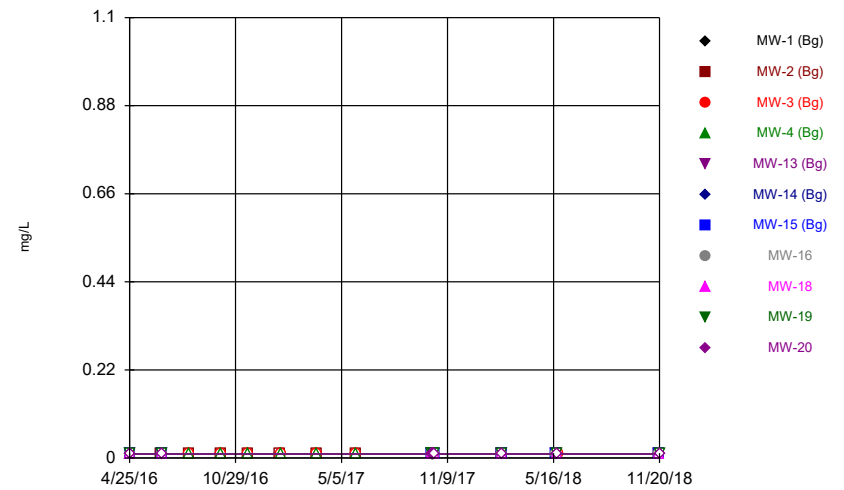
Constituent: Lithium Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



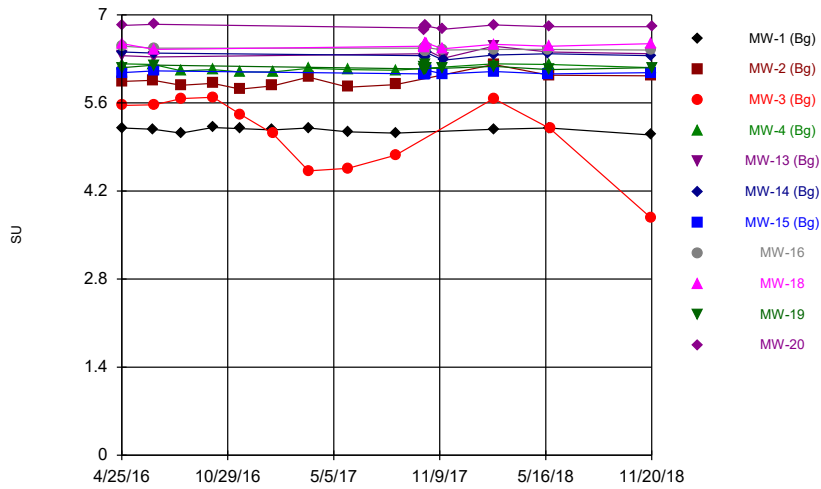
Constituent: Mercury Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Time Series



Constituent: Molybdenum Analysis Run 1/9/2019 1:37 PM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

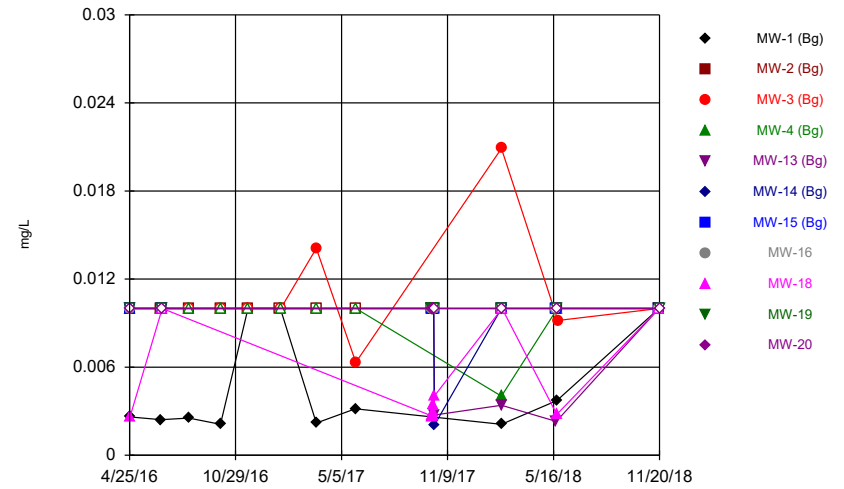
Time Series



Constituent: pH Analysis Run 1/9/2019 1:37 PM View: Time Series  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

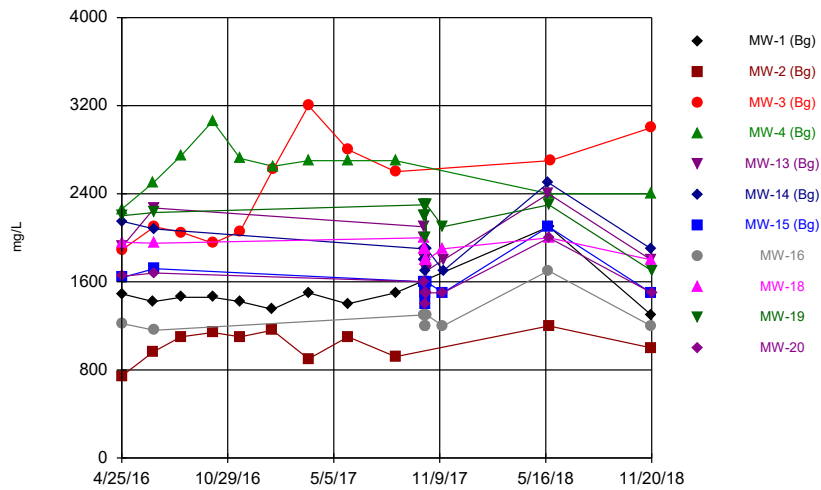
Hollow symbols indicate censored values.

Time Series



Constituent: Selenium Analysis Run 1/9/2019 1:37 PM View: Time Series  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

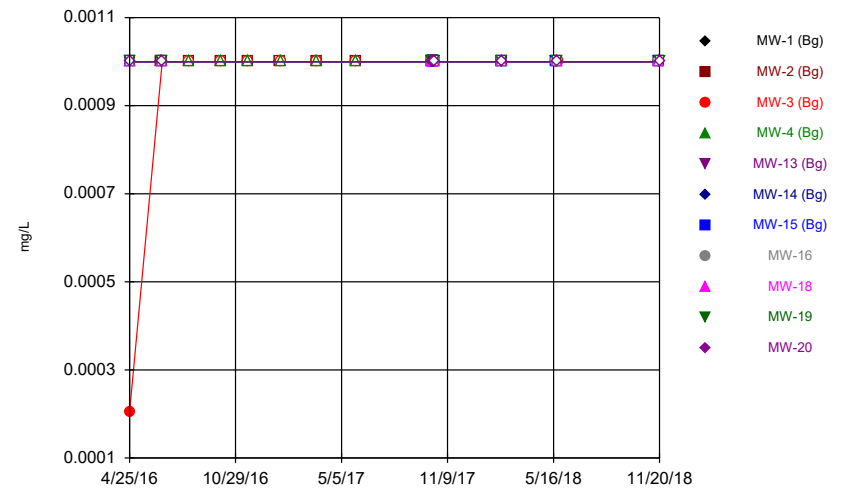
Time Series



Constituent: Sulfate Analysis Run 1/9/2019 1:37 PM View: Time Series  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

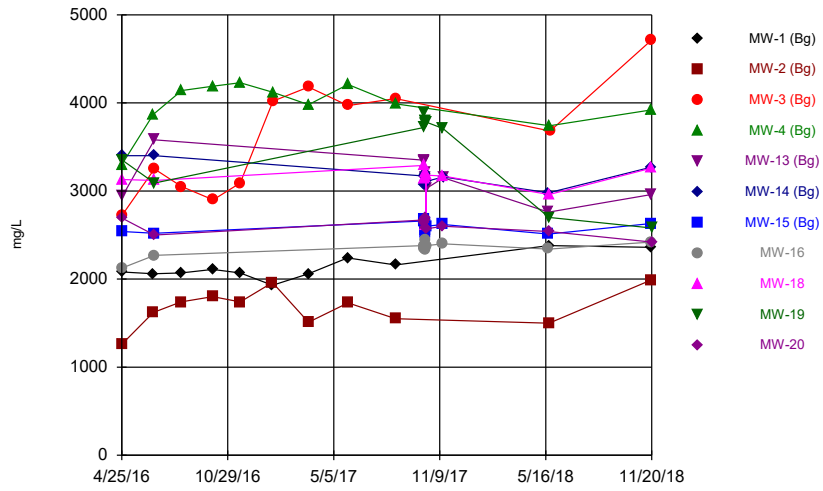
Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 1/9/2019 1:37 PM View: Time Series  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Time Series



Constituent: Total Dissolved Solids    Analysis Run 1/9/2019 1:37 PM    View: Time Series  
Plant William C Gorgas    Client: Southern Company    Data: Gorgas Gypsum Landfill

# Upper Tolerance Limits - App IV

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/9/2019, 1:40 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	77	n/a	n/a	100	n/a	n/a	0.01926	NP Inter(NDs)
Arsenic (mg/L)	0.005	77	n/a	n/a	83.12	n/a	n/a	0.01926	NP Inter(NDs)
Barium (mg/L)	0.01553	76	0.01147	0.002062	1.316	None	No	0.05	Inter
Beryllium (mg/L)	0.0185	76	n/a	n/a	88.16	n/a	n/a	0.02028	NP Inter(NDs)
Boron (mg/L)	0.06755	77	0.04352	0.01221	10.39	None	No	0.05	Inter
Cadmium (mg/L)	0.00473	75	n/a	n/a	70.67	n/a	n/a	0.02134	NP Inter(normal...
Chromium (mg/L)	0.01	77	n/a	n/a	96.1	n/a	n/a	0.01926	NP Inter(NDs)
Cobalt (mg/L)	0.3753	77	-3.477	1.269	14.29	None	ln(x)	0.05	Inter
Combined Radium 226 + 228 (pCi/L)	1.91	76	n/a	n/a	0	n/a	n/a	0.02028	NP Inter(normal...
Fluoride (mg/L)	0.4604	84	0.2523	0.1065	0	None	No	0.05	Inter
Lead (mg/L)	0.00692	77	n/a	n/a	98.7	n/a	n/a	0.01926	NP Inter(NDs)
Lithium (mg/L)	0.323	76	n/a	n/a	1.316	n/a	n/a	0.02028	NP Inter(normal...
Mercury (mg/L)	0.0005	77	n/a	n/a	100	n/a	n/a	0.01926	NP Inter(NDs)
Molybdenum (mg/L)	0.01	77	n/a	n/a	100	n/a	n/a	0.01926	NP Inter(NDs)
Selenium (mg/L)	0.0209	77	n/a	n/a	77.92	n/a	n/a	0.01926	NP Inter(NDs)
Thallium (mg/L)	0.001	77	n/a	n/a	98.7	n/a	n/a	0.01926	NP Inter(NDs)

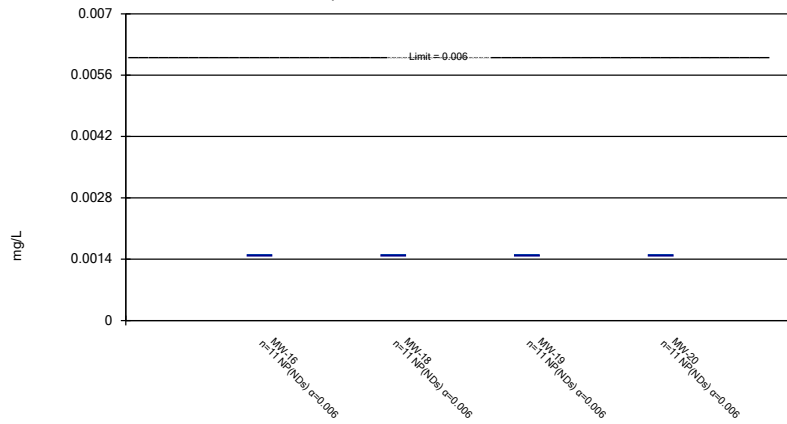
# Confidence Intervals - All Results (No Significant Results)

Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill Printed 1/31/2019, 12:17 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	MW-16	0.0015	0.0015	0.006	No	11	100	No	0.006	NP (NDs)
Antimony (mg/L)	MW-18	0.0015	0.0015	0.006	No	11	100	No	0.006	NP (NDs)
Antimony (mg/L)	MW-19	0.0015	0.0015	0.006	No	11	100	No	0.006	NP (NDs)
Antimony (mg/L)	MW-20	0.0015	0.0015	0.006	No	11	100	No	0.006	NP (NDs)
Arsenic (mg/L)	MW-16	0.003906	0.002779	0.01	No	11	9.091	No	0.01	Param.
Arsenic (mg/L)	MW-18	0.0025	0.0025	0.01	No	11	100	No	0.006	NP (NDs)
Arsenic (mg/L)	MW-19	0.0025	0.0025	0.01	No	11	100	No	0.006	NP (NDs)
Arsenic (mg/L)	MW-20	0.0025	0.0025	0.01	No	11	100	No	0.006	NP (NDs)
Barium (mg/L)	MW-16	0.01366	0.01272	2	No	11	0	No	0.01	Param.
Barium (mg/L)	MW-18	0.0113	0.0087	2	No	11	0	No	0.006	NP (normality)
Barium (mg/L)	MW-19	0.01107	0.00859	2	No	11	9.091	x^2	0.01	Param.
Barium (mg/L)	MW-20	0.01594	0.01482	2	No	11	0	No	0.01	Param.
Beryllium (mg/L)	MW-16	0.0015	0.0015	0.007	No	11	100	No	0.006	NP (NDs)
Beryllium (mg/L)	MW-18	0.0015	0.0015	0.007	No	11	100	No	0.006	NP (NDs)
Beryllium (mg/L)	MW-19	0.0015	0.0015	0.007	No	11	100	No	0.006	NP (NDs)
Beryllium (mg/L)	MW-20	0.0015	0.0015	0.007	No	11	100	No	0.006	NP (NDs)
Boron (mg/L)	MW-16	0.04857	0.0447	4	No	11	9.091	No	0.01	Param.
Boron (mg/L)	MW-18	0.0399	0.0311	4	No	11	9.091	x^(1/3)	0.01	Param.
Boron (mg/L)	MW-19	0.039	0.0348	4	No	11	9.091	No	0.006	NP (normality)
Boron (mg/L)	MW-20	0.1095	0.1039	4	No	11	0	No	0.01	Param.
Cadmium (mg/L)	MW-16	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	MW-18	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	MW-19	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Cadmium (mg/L)	MW-20	0.0005	0.0005	0.005	No	11	100	No	0.006	NP (NDs)
Chromium (mg/L)	MW-16	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Chromium (mg/L)	MW-18	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Chromium (mg/L)	MW-20	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Cobalt (mg/L)	MW-16	0.01023	0.008504	0.3753	No	11	0	No	0.01	Param.
Cobalt (mg/L)	MW-18	0.005	0.0025	0.3753	No	11	90.91	No	0.006	NP (NDs)
Cobalt (mg/L)	MW-19	0.171	0.071	0.3753	No	11	0	No	0.006	NP (normality)
Cobalt (mg/L)	MW-20	0.005	0.0025	0.3753	No	11	100	No	0.006	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	MW-16	0.964	-0.0572	5	No	11	0	No	0.006	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-18	1.15	-0.105	5	No	11	0	No	0.006	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-19	0.8196	0.3442	5	No	11	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.148	0.6559	5	No	11	0	No	0.01	Param.
Fluoride (mg/L)	MW-16	0.18	0.168	4	No	12	0	No	0.01	NP (normality)
Fluoride (mg/L)	MW-18	0.3188	0.3049	4	No	12	0	No	0.01	Param.
Fluoride (mg/L)	MW-19	0.35	0.28	4	No	12	0	No	0.01	NP (normality)
Fluoride (mg/L)	MW-20	0.1321	0.1214	4	No	12	0	No	0.01	Param.
Lead (mg/L)	MW-16	0.0025	0.0025	0.015	No	11	100	No	0.006	NP (NDs)
Lead (mg/L)	MW-18	0.0025	0.0025	0.015	No	11	100	No	0.006	NP (NDs)
Lead (mg/L)	MW-19	0.0025	0.0025	0.015	No	11	100	No	0.006	NP (NDs)
Lead (mg/L)	MW-20	0.0025	0.0025	0.015	No	11	100	No	0.006	NP (NDs)
Lithium (mg/L)	MW-16	0.01806	0.01543	0.323	No	11	9.091	x^4	0.01	Param.
Lithium (mg/L)	MW-18	0.06178	0.05683	0.323	No	11	0	No	0.01	Param.
Lithium (mg/L)	MW-19	0.08656	0.0643	0.323	No	11	0	x^2	0.01	Param.
Lithium (mg/L)	MW-20	0.2678	0.255	0.323	No	11	0	No	0.01	Param.
Mercury (mg/L)	MW-16	0.00025	0.00025	0.002	No	11	100	No	0.006	NP (NDs)
Mercury (mg/L)	MW-18	0.00025	0.00025	0.002	No	11	100	No	0.006	NP (NDs)
Mercury (mg/L)	MW-19	0.00025	0.00025	0.002	No	11	100	No	0.006	NP (NDs)
Mercury (mg/L)	MW-20	0.00025	0.00025	0.002	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	MW-16	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	MW-18	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	MW-19	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Molybdenum (mg/L)	MW-20	0.005	0.005	0.1	No	11	100	No	0.006	NP (NDs)
Selenium (mg/L)	MW-16	0.005	0.005	0.05	No	11	100	No	0.006	NP (NDs)
Selenium (mg/L)	MW-18	0.005	0.00263	0.05	No	11	27.27	No	0.006	NP (normality)
Selenium (mg/L)	MW-19	0.005	0.005	0.05	No	11	100	No	0.006	NP (NDs)
Selenium (mg/L)	MW-20	0.005	0.005	0.05	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	MW-16	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	MW-18	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	MW-19	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	MW-20	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)

### Non-Parametric Confidence Interval

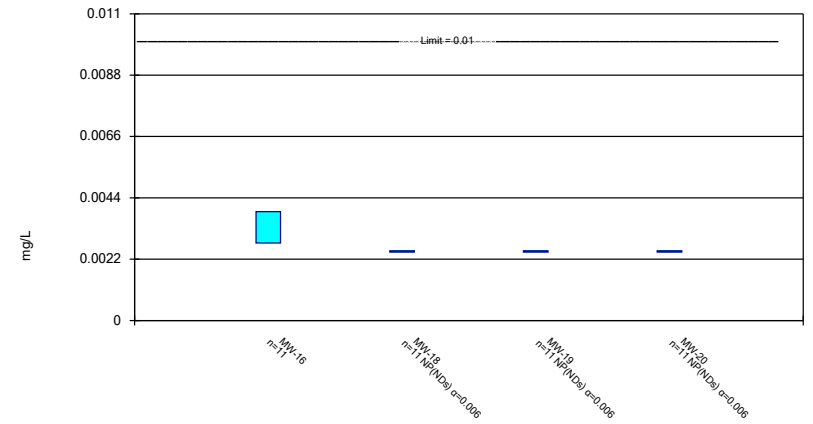
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 1/31/2019 12:15 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Parametric and Non-Parametric (NP) Confidence Interval

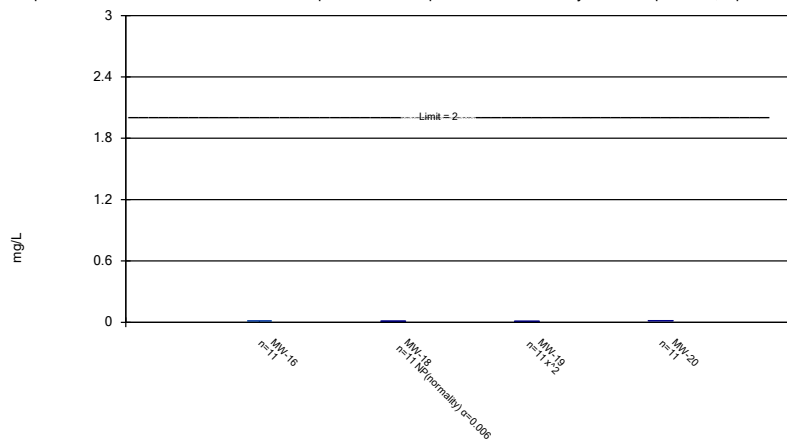
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 1/31/2019 12:15 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Parametric and Non-Parametric (NP) Confidence Interval

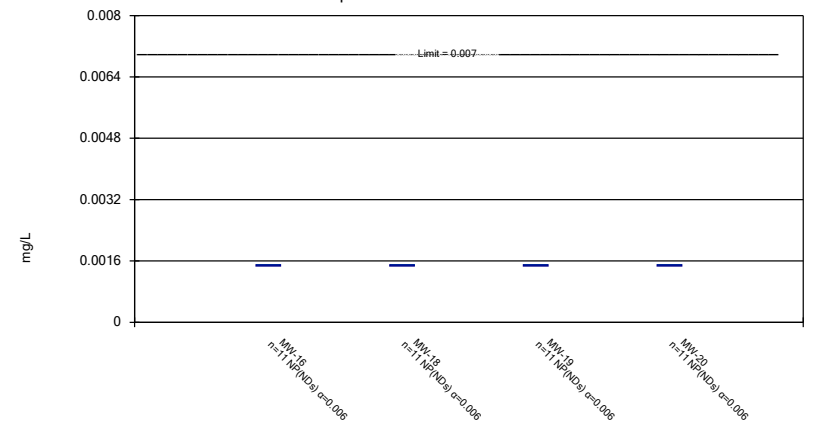
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

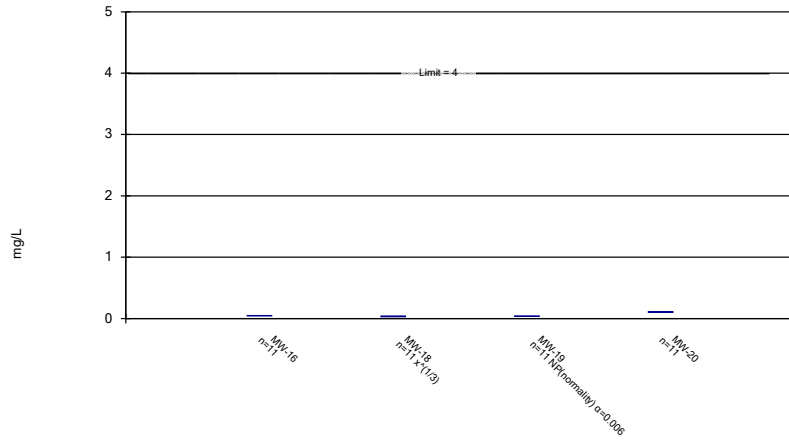
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Parametric and Non-Parametric (NP) Confidence Interval

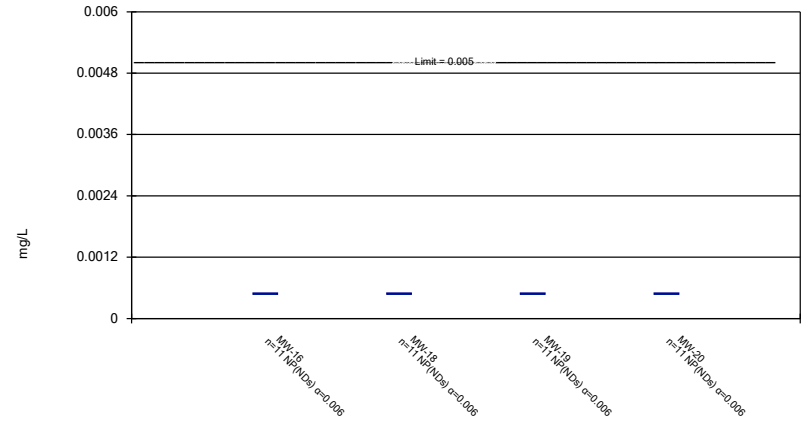
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Boron Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

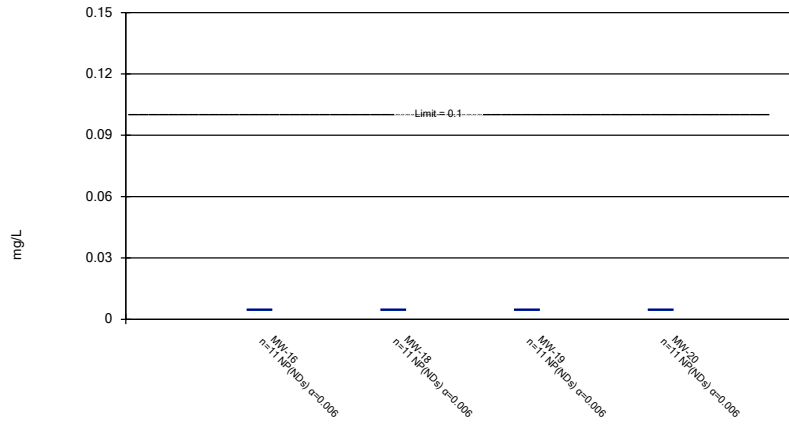
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

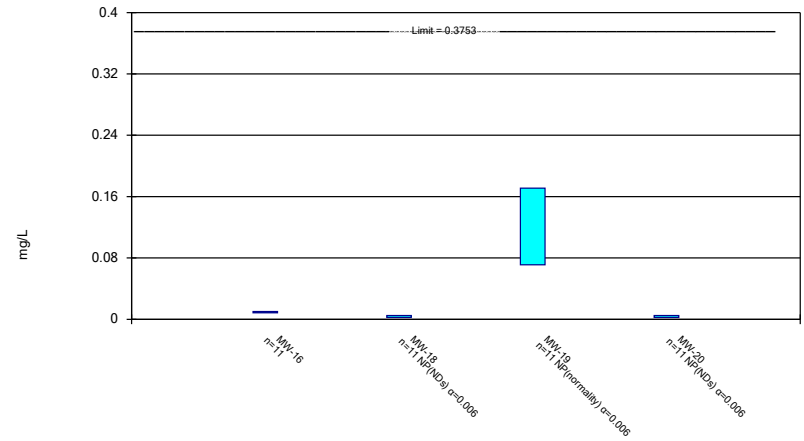
Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### 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.

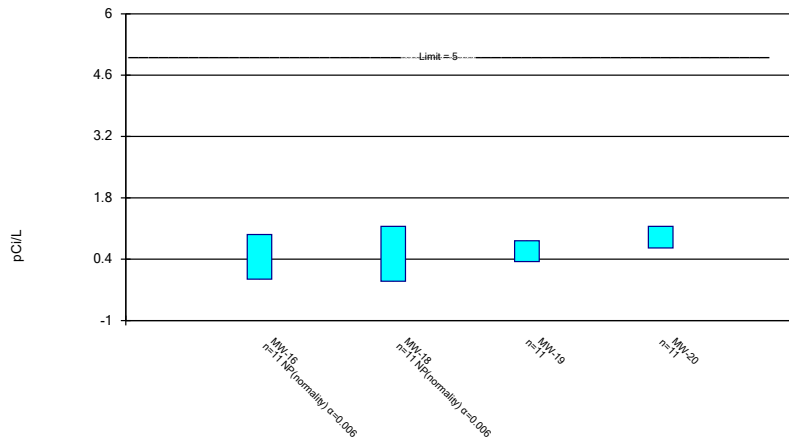


Constituent: Cobalt Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
 Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill



Parametric and Non-Parametric (NP) Confidence Interval

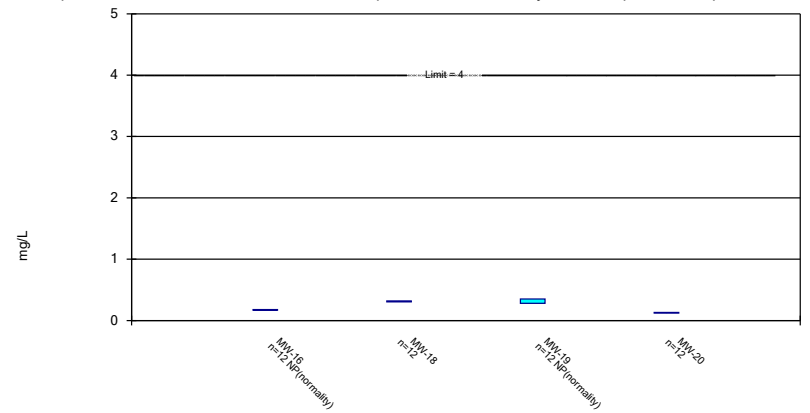
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Parametric and Non-Parametric (NP) Confidence Interval

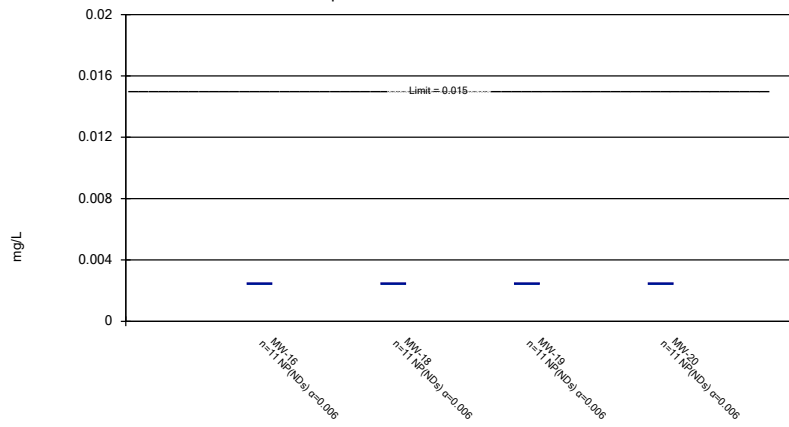
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Constituent: Fluoride Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Non-Parametric Confidence Interval

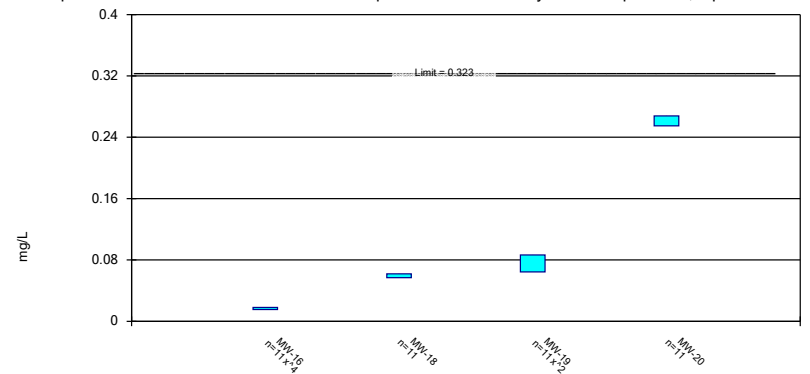
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

Parametric Confidence Interval

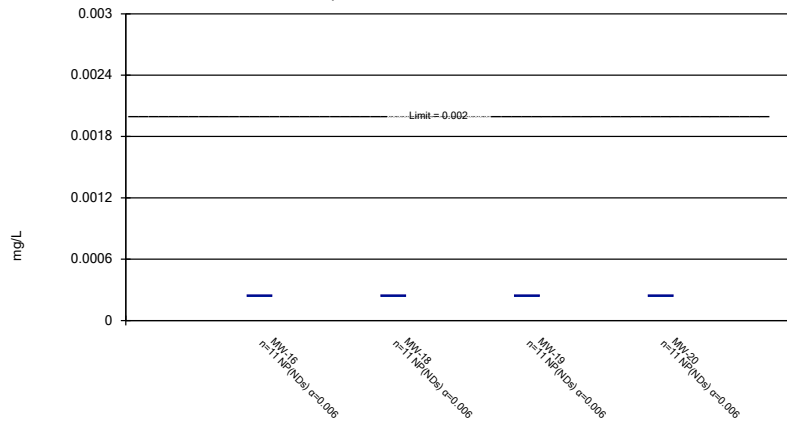
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Constituent: Lithium Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

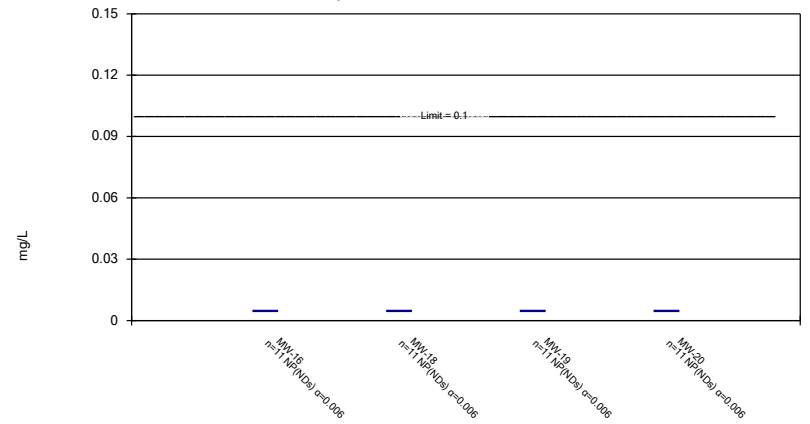
Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

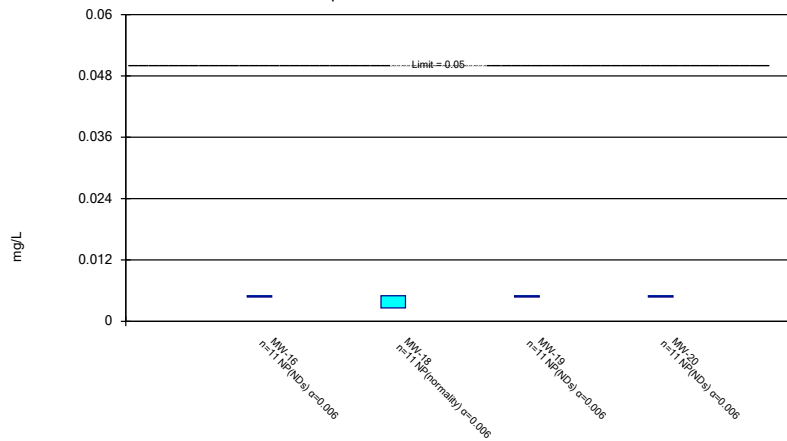
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

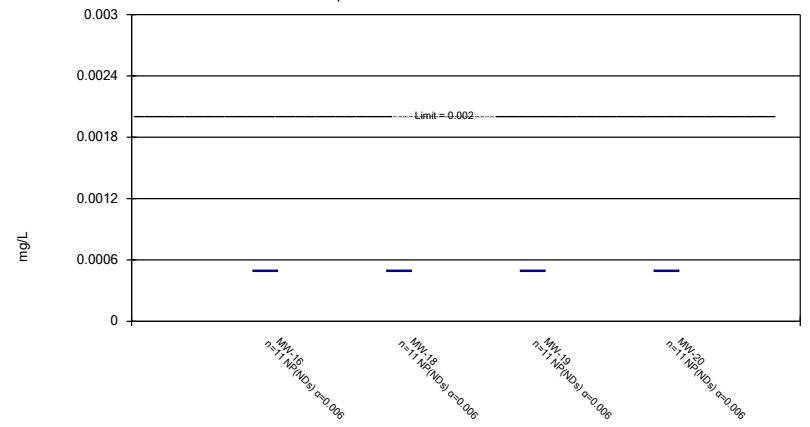
Compliance Limit is not exceeded.



Constituent: Selenium Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 1/31/2019 12:16 PM View: Confidence Intervals - App IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas Gypsum Landfill

# Appendix C

*Prepared for*

**Alabama Power Company**

600 North 18<sup>th</sup> Street

Birmingham, AL 35203

**ALTERNATE SOURCE DEMONSTRATION  
PLANT GORGAS GYPSUM LANDFILL**

*Prepared By*

Southern Company Services

January 2019

## Certification Statement

This Alternate Source Demonstration for the Alabama Power Company, Plant Gorgas, Gypsum Landfill, has been prepared in compliance with applicable United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D; published in 80 FR 21302-21501, April 17, 2015) and ADEM Admin Code r. 335-13-15-.06(6)(g)4.(ii) under the direction of a licensed professional engineer with Southern Company Services.

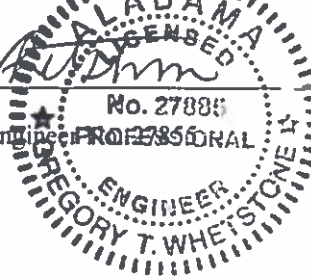
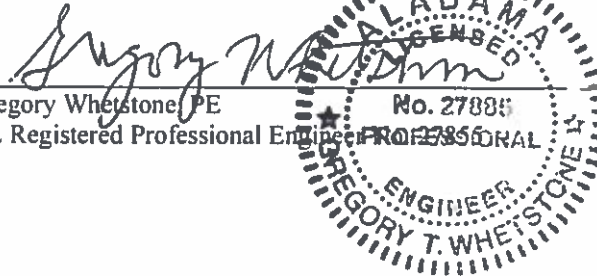
I hereby certify that this *Alternate Source Demonstration* has been prepared to meet the requirements of 40 CFR §257.95(g)(3)(ii) and ADEM Admin Code r. 335-13-15-.06(6)(g)4.(ii).



\_\_\_\_\_  
Gregory B. Dyer, PG  
AL Registered Professional Geologist No. 1471

11/30/2019

\_\_\_\_\_  
Date



\_\_\_\_\_  
Gregory Whetstone, PE  
AL Registered Professional Engineer No. 27885

11/30/19

\_\_\_\_\_  
Date

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## LIST OF ACRONYMS

ASD	Alternate Source Demonstration
CCR	Coal Combustion Residual
EPA	United States Environmental Protection Agency
GWPS	Groundwater Protection Standard
SSI	Statistically Significant Increase
SSL	Statistically Significant Levels

## **1 INTRODUCTION**

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D; published in 80 FR 21302-21501, April 17, 2015) (CCR Rule or The Rule), this Alternate Source Demonstration (ASD), Alabama Power Company Plant William C. Gorgas (Plant Gorgas) Gypsum Landfill, has been prepared to document an alternate source for exceedances of groundwater protection standards (GWPS) at statistically significant levels (SSLs) at the Gypsum Landfill during semi-annual assessment monitoring in 2018. This document satisfies the requirements of 40 CFR § 257.95 (g)(3)(ii) and r. 335-13-15-.06(6)(g)4.(ii), which allows the owner or operator to demonstrate that a source other than the CCR Unit has caused an SSL or that the SSL resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

As documented by this report, the SSLs for lithium in 2018 are attributed to natural variability in groundwater quality, error in sampling, or error in analysis and are not caused by a release from the CCR unit.

## **2 BACKGROUND**

Plant Gorgas Gypsum Landfill is presently in assessment monitoring and completed semiannual assessment groundwater sampling in May and November 2018. Parametric tolerance limits were used to calculate background limits from pooled upgradient well data for Appendix IV parameters with a target of 95% confidence and 95% coverage. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and ADEM Admin. Code r. 335-13-15-.06(6)(h).

For the first semi-annual assessment monitoring event, statistical analysis of Appendix IV data identified exceedance of a GWPS at statistically significant levels (SSLs) at MW-20 for Lithium.

Statistical analysis performed for the second semi-annual monitoring event did not identify any SSLs as the SSL for lithium from the first semi-annual event did not re-occur.

**Alternate Source Demonstration -**  
Plant Gorgas Gypsum Landfill

As discussed in the following section, the SSL for lithium is attributed to natural variability in groundwater quality, error in sampling, or error in analysis and are clearly not caused by a release from the CCR unit.

### **3 ALTERNATE SOURCE DEMONSTRATION**

Based on the review of site information, the SSL for lithium in well MW-20 observed in 2018 are not related to a release from the Gypsum Landfill, but the result of an alternate source or resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The following presents the lines of evidence supporting this conclusion.

- Alabama Power Company (APC) began construction on the Plant Gorgas Gypsum Landfill in 2011. Permit 64-10 was effective beginning January 8th, 2016. To date, no gypsum has been placed in the gypsum landfill.
- The Gypsum Pond is constructed with a liner system that meets the composite liner requirements of 40 CFR § 257.70(b) and ADEM Administrative Code r. 335-13-15-.04(1)(b). This low permeability liner system restricts pond porewater from migrating vertically into groundwater; and
- The Gypsum Pond meets all applicable location restrictions, including that for groundwater separation which requires a vertical separation of at least 5 feet between the base of the facility and seasonal high groundwater elevations.

Since waste has not been placed in the Gypsum Landfill, a release from the unit cannot be the cause of an SSL.



#### **4 CONCLUSIONS**

This ASD has been prepared in response to an SSL identified for lithium in groundwater monitoring well MW-20 for the Plant Gorgas Gypsum Landfill following the May 2018 sampling event. In accordance with 40 CFR § 257.95 (g)(3)(ii) and r. 335-13-15-.06(6)(g)4.(ii), this ASD demonstrates that the SSL is not the result of a release from the Gypsum Landfill and no further action, such as implementing an assessment of corrective measures, is necessary.

**Alternate Source Demonstration -**  
Plant Gorgas Gypsum Landfill

## **5 REFERENCES**

Alabama Department of Environmental Management (ADEM), 2018, Solid Waste Program,  
Division 13, ADEM Admin. Code r. 335-13-15

EPA (2015). Hazardous and Solid Waste Management Systems; Disposal of Coal Combustion Residuals  
from Electric Utilities; Final Rule, 40 CFR Parts 257 and 261, Federal Register, Vol. 80, No. 74,  
April 17, 2015, pp.21302-21501