

2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

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

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Prepared for

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ABBREVIATIONS

AL	Alabama
APC	Alabama Power Company
APCEL	APC Environmental Laboratory
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
GPM	Gallons per Minute
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
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
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 (EPA) coal combustion residual (CCR) rule (40 CFR 257 Subpart D), this 2017 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2017 groundwater monitoring activities at the Plant Gorgas Bottom Ash Landfill and satisfies the requirements of §257.90(e). Semi-annual monitoring and reporting for Plant Gorgas Bottom Ash Landfill is performed in accordance with the monitoring requirements §257.90 through §257.94.

2.0 SITE LOCATION AND DESCRIPTION

Alabama Power Company's William C. Gorgas Electric Generating Plant (Plant Gorgas) is located in southeastern Walker County. The physical address is 460 Gorgas Road, Parrish, AL 35580. Plant Gorgas lies in portions of Sections 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, and 29, Township 16 South, Range 6 West and Section 12, 13, and 24, Township 16 South, Range 7 West. Section/Township/Range data are based on visual inspection of USGS topographic quadrangle maps and GIS maps (USGS, 1975; USGS, 1983).

Plant Gorgas Bottom Ash 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 Bottom Ash 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 and Baker Creek 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 Site 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 Bottom Ash landfill with an average piezometric surface rising to 18 feet above the base of the screen.

The saturated thickness of the first saturated zone ranges between 3 and 8 feet. Hydraulic conductivity (K) in this zone varies widely, but is generally between 10^{-1} to 10^{-4} cm/sec. Well developments generally indicate low groundwater yields (quantity) between 0.05 and 1.0 gallons per minute (gpm).

3.3 Uppermost Aquifer

The principal aquifer system from a local and regional perspective is the Pottsville Formation. The Pottsville Formation is also the uppermost aquifer beneath the site. In the Pottsville, two types of secondary porosity were observed to yield groundwater: (1) fractured intervals and (2) bedding plane weaknesses associated with fissile, siderite-banded, iron-claystone sequences. Fractured intervals are sporadic across the site and tend to occur with greater density in the upper 100 feet of rock. The upper portions of the Pottsville Aquifer beneath the proposed disposal facilities indicate unconfined to semi-confined, fractured, and extremely anisotropic conditions. The Pottsville Aquifer functions as a series of confined to semi-confined water producing zones (aquifers) since large permeability contrasts exist within the strata (Stricklin, 1989). Depth to groundwater varies significantly across the site and is wholly dependent upon encountering a fractured interval or zone of fissile, iron-claystone.

Based on published data, groundwater quality produced from the Pottsville Formation can be characterized by high concentrations of sulfate, iron, and other trace metals (Jennings and Cook, 2010). Trace metals in Pottsville Formation groundwater are associated with sulfide minerals contained in organic-rich strata (e.g., Mudstones and Coal Seams) and siliceous/carbonate healed fractures and joints. Trace element enrichment is likely the result of migrating hydrothermal fluids generated during the late Paleozoic Allegheny orogeny (Diehl et al., 2005). Arsenic, antimony, molybdenum, selenium, copper, thallium, and mercury are elevated in Warrior Basin coal strata (Goldhaber et al., 2002).

3.4 Flow Interpretation

Gravity is the dominant force driving groundwater flow in the first saturated zone beneath the site. The topography of the site creates a localized flow system where groundwater flow direction is south and south-southeast across the site, paralleling trends in topography, structural dip, and historic strip pit floors. Mine spoil layering and complex Pottsville Formation lithofacies contribute to the vertical and horizontal heterogeneity present within the aquifer system and overlying saturated mine spoils. This heterogeneity focuses groundwater flow along more permeable pathways, such as parallel to coal seams and bedding plains, or along vertical or sub-vertical discontinuities in the rock fabric. Thus, groundwater flow paths across the site may be tortuous.

4.0 GROUNDWATER MONITORING SYSTEM

Pursuant to §257.91, Plant Gorgas has installed a groundwater monitoring system to monitor groundwater within the uppermost aquifer. The PE-certified groundwater monitoring system for the Bottom Ash Landfill is designed to monitor groundwater passing the waste boundary of the CCR unit within the uppermost aquifer. Wells were located to serve as upgradient or downgradient monitoring locations based on groundwater flow direction as determined by the potentiometric surface elevation measurements.

Monitoring wells were generally screened across the mine overburden – top of rock interface as this corresponds to the first zone of saturation beneath the site. The monitoring system is designed to monitor water quality as groundwater flows to the north and south across the site. All groundwater monitoring wells were designed and constructed using “Design and Installation of Groundwater Monitoring Wells in Aquifers”, ASTM Subcommittee D18.21, as a guide.

4.1 Monitoring Wells

The groundwater monitoring network is comprised of 9 monitoring wells. As required by §257.90(e)(1), monitoring well locations referenced to the Bottom Ash Landfill 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 Bottom Ash Landfill.

4.1.1 Upgradient Wells

Monitoring well locations MW-1 through MW-4 serve as upgradient locations for the Bottom Ash Landfill. Upgradient wells are screened within the same hydrostratigraphic interval as downgradient locations and are representative of background groundwater quality at the site.

4.1.2 Downgradient Wells

Monitoring well locations MW-7, MW-8, and MW-10 through MW-12 serve as downgradient locations for the Bottom Ash Landfill.

Table 1. Groundwater Monitoring Well Network Details

Well ID	Purpose	Northing	Easting	Top of Casing Elevation (feet MSL)	Ground Elevation (feet MSL)	Total Depth	Top of Screen Elevation (feet MSL)	Bottom of Screen Elevation (feet MSL)
MW-1	Upgradient	1330794.338	594082.002	501.38	499.19	104.1	405.10	395.1
MW-2	Upgradient	1331061.409	593662.163	502.17	498.54	90.6	417.90	407.9
MW-3	Upgradient	1330859.164	593118.888	525.9	522.23	115.1	417.10	407.1
MW-4	Upgradient	1330289.811	592896.568	517.89	516.67	126.3	400.40	390.4
MW-7	Downgradient	1328515.235	593408.341	394.36	391.59	70.6	331.00	321.00
MW-8	Downgradient	1329140.729	593813.964	415.53	413.15	68.9	354.30	344.30
MW-10	Downgradient	1327686.069	593704.952	395.10	391.66	105.0	307.40	287.4
MW-11	Downgradient	1328083.497	594546.311	406.96	403.69	131.6	282.10	272.1
MW-12	Downgradient	1328578.930	594708.212	474.24	470.74	165.6	315.10	305.1

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.

5.0 GROUNDWATER MONITORING HISTORY

As required by §257.90(e), the following describes monitoring-related activities performed during the preceding year. Since this is the first Annual Groundwater Monitoring and Corrective Action Report, it also describes related activities performed prior to 2017.

5.1 Available Monitoring Data

In accordance with §257.94(b), the detection groundwater program was implemented by collecting 8 independent samples. Samples were collected from each background and downgradient well and analyzed for the constituents listed in Appendix III and IV. Background sampling was performed over the period from April 2016 to October 2017.

Following background monitoring, the initial detection monitoring event was completed by collecting an additional round of groundwater samples in November 2017. Groundwater samples were collected from each monitoring well and analyzed for Appendix III constituents according to §257.94(a). Analytical data from the background and initial groundwater monitoring events is included as **Appendix A, Groundwater Analytical Data**, in accordance with the requirements of §257.90(e)(3).

Table 2, Historical Well Sampling Summary, presents a summary of groundwater sampling events completed at the site for the preceding year, as well as background samples collected prior to 2017. Table 2 also identifies the purpose of the sampling event.

5.2 Historical Groundwater Flow

Historical potentiometric data from the site show that groundwater flow is generally is a subdued representation of topography. Groundwater flows from north to south and south-southeast across the site.

Groundwater elevations fluctuate in response to rainfall. Seasonal variations of 0.2 to 6 feet are typical at the site. **Figure 4, Potentiometric Surface Map (November 2017)**, confirms that groundwater flow direction is consistent despite seasonal fluctuations. Groundwater elevation data indicates that water levels tend to be higher in the spring and early summer and lower during the fall and winter seasons. **Table 3, Historical Groundwater Elevations Summary** below provides a summary of water level data for the site.

Table 2. Historical Well Sampling Summary									
	Background								Detection
Event	B.1	B.2	B.3	B.4	B.5	B.6	B.7	B.8	D.1
Date	4/25/16	6/20/16	10/12/17	10/13/17	10/14/17	10/15/17	10/16/17	10/17/17	11/16/17

Notes: (1) B.# indicates background event
 (2) D.# indicates detection event

Table 3. Historical Groundwater Elevations Summary				
Well ID	Average GW Elevation (ft MSL)	Highest GW Elevation (ft MSL)	Lowest GW Elevation (ft MSL)	GW Elevation Variation (ft)
MW-1	410.79	411.35	410.20	1.15
MW-2	416.76	417.71	416.03	1.68
MW-3	415.47	418.23	414.43	3.80
MW-4	400.26	401.76	398.79	2.97
MW-7	334.28	336.16	333.48	2.68
MW-8	352.27	352.83	350.92	1.91
MW-10	309.68	310.15	308.95	1.20
MW-11	305.65	308.71	302.76	5.95
MW-12	319.38	321.11	318.35	2.76

*Groundwater elevations are referenced to NAVD88

6.0 GROUNDWATER SAMPLING AND ANALYSIS

6.1 Sampling Event Summary

Groundwater sampling for the initial detection monitoring event was performed in November 2017. Samples were analyzed for the constituents listed in Appendix III. Analytical data from the groundwater monitoring events are included as Appendix A

6.2 Groundwater Sample Collection

Groundwater samples were collected in accordance with §257.93(a). All monitoring wells at the Plant Gorgas Bottom Ash Landfill 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:

- 0.1 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, placed in iced coolers, and submitted to the laboratory following standard chain-of-custody (COC) protocol.

6.3 Sample Preservation and Handling

Groundwater samples were collected within the designated size and type of containers required for specific parameters. Sample bottles were pre-preserved by the laboratory and did not require field preservation. Where temperature control was required, samples were placed in an ice-packed cooler.

6.4 Chain of Custody

All samples were handled under strict COC procedures beginning in the field through delivery to the laboratory. The COC forms contain the following information:

- Sample destination and transporter,
- Sample identification numbers,
- Signature of collector,
- Date and time of collection,

- Identification of monitoring well,
- Number of sample containers,
- Parameters requested for analysis,
- Signature of person(s) involved in the chain of possession, and
- Inclusive dates of possession.

6.5 Laboratory Analysis

Groundwater samples collected for background data included both Appendix III and Appendix IV parameters. Groundwater samples collected during the November 2017 detection monitoring event were analyzed for Appendix III monitoring parameters only. Analytical methods used for groundwater sample analysis are listed on the analytical laboratory reports included in Appendix A.

Laboratory analyses were 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.

6.6 Quality Assurance and 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 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 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 (RPDs), 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.

7.0 GROUNDWATER DATA EVALUATION

7.1 Groundwater Elevation Data Evaluation

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

During the most recent sampling event, static groundwater elevations obtained prior to purging and sampling ranged from 416 to 308 feet MSL downgradient of the site. Groundwater levels for the most recent sampling event are included in **Table 4, Groundwater Elevations (November 2017)**.

The most recent potentiometric surface map presented in **Figure 4, Potentiometric Surface Map (November 2017)**, shows that groundwater flow is generally in an arcuate pattern from north to south. Therefore, background monitoring locations yield samples representative of background water quality at the site and compliance locations are installed properly to capture impacts in the unlikely event of leakage from one of the landfill units.

Table 4. Groundwater Elevations (November 2017)

Well ID	TOC Elev (ft MSL)	Depth to GW (ft TOC)	GW Elevation
MW-1	502.38	91.59	410.79
MW-2	502.12	85.38	416.74
MW-3	525.90	110.49	415.41
MW-4	517.89	118.03	399.86
MW-7	394.36	60.45	333.91
MW-8	415.53	62.80	352.73
MW-10	395.10	85.37	309.73
MW-11	406.96	98.25	308.71
MW-12	474.24	154.96	319.28

8.0 BACKGROUND GROUNDWATER QUALITY DATA

Groundwater elevation data and potentiometric surface maps were utilized to determine upgradient or “background” monitoring well locations. These well locations provide representative samples of groundwater quality as it enters the site.

8.1 Statistical Methodology and Tests

The Sanitas™ Groundwater statistical software (v9.5) was used to perform the statistical analyses. Sanitas™ is a proprietary decision support software package, developed in 1991, that incorporates the statistical tests required of Subtitle C and D facilities by EPA regulations. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the USEPA Unified Guidance (2009).

Intrawell prediction limits combined with a 1-of-2 verification resample plan are used to evaluate calcium, fluoride, sulfate and TDS; while interwell prediction limits combined with a 1-of-2 resample plan are used to evaluate boron, chloride 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 statistically significant increases (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.

Time series plots were used to screen proposed background data for suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective. Suspected outliers are formally tested using Tukey’s box plot method when applicable, and when identified, are flagged in the computer database with “o” and deselected prior to construction of statistical limits.

No outliers were identified for any of the Appendix III parameters at any of the wells except for the boron concentration of 0.253 mg/L at well MW-7. When any values are identified as outliers, they are plotted in a lighter font on the time series graph. A substitution of the most recent reporting limit was applied when varying detection limits existed in data.

No true seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

The Sen's Slope/Mann Kendall trend test was used to evaluate all background data at each well to identify statistically significant increasing or decreasing trends. The results of the trend analyses showed a few statistically significant increasing and decreasing trends. All trends noted were relatively low in magnitude when compared to average concentrations except for chloride at well MW-7. Since interwell methods are utilized for this constituent, no adjustment to the background period at this well was necessary. Additionally, no other adjustments were recommended to any data sets.

Prediction limits are constructed as recommended in the USEPA Unified guidance, and based on the following:

Annual false positive rate of 10%
1-of-2 verification resample plan (Intrawell Prediction Limits)
1-of-2 verification resample plan (Interwell Prediction Limits)
Semi-annual sampling
Constituents = 7 (Appendix III)
Downgradient wells = 5

Parametric prediction limits are used when the screened historical data follow a normal or transformed-normal distribution. When data could not be normalized or when the majority of data were non-detects, a non-parametric test was utilized. The confidence level associated with both tests is greater than 99%. The distribution of data was tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (USEPA, 2009), data were analyzed using either parametric or non-parametric prediction limits.

The following guidance is also applicable to the statistical analysis method:

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

The statistical evaluation report is located in **Appendix B, Statistical Data Evaluation**.

8.2 Statistical Exceedances

Analytical data from the initial detection monitoring event in November 2017 at the Bottom Ash Landfill was statistically analyzed in accordance with the PE-certified statistical methods described above. Based

on the statistical analysis included in Appendix B, SSIs of the prediction limit were identified. Summary tables identifying the SSIs are included in Appendix B.

8.3 Verification Sampling

The statistical methods incorporate the option of resampling to verify SSIs. Verification sampling was not conducted for the initial detection monitoring event; therefore, the initial SSIs are treated as verified.

8.4 Appendix IV Background Data

Pursuant to §257.95, Appendix IV groundwater quality data is statistically analyzed and compared to groundwater protection standards if assessment monitoring is implemented. APC is currently performing detection monitoring at the Bottom Ash Landfill per §257.94 and has not implemented assessment monitoring. Therefore, statistical analysis of the Appendix IV data has not been performed.

9.0 MONITORING PROGRAM STATUS

Plant Gorgas Bottom Ash Landfill is in detection monitoring. SSIs of Appendix III parameters have been identified. Pursuant to §257.94(e)(1), APC has 90 days from the date of determination to either (1) prepare a demonstration that a source other than the Bottom Ash Landfill was the cause, or (2) implement assessment monitoring per §257.95. APC will address the reported SSIs in accordance with the requirements, and options, of §257.94(e)(1-3) and (f).

10.0 CONCLUSIONS AND FUTURE ACTIONS

In accordance with §257.94(b), eight (8) independent samples were collected from each background and downgradient well and analyzed for the constituents listed in Appendix III and IV. Background sampling was performed over the period of April 2016 to October 2017. Groundwater sampling for the first detection monitoring event was performed in November 2017. Constituents listed in Appendix III were collected and analyzed for detection monitoring. APC will perform the following future actions:

- Conduct alternate source demonstration or complete groundwater sampling for Assessment Monitoring within 90 days of determining the SSI, and
- Conduct the first semi-annual detection monitoring event by April 2018.

11.0 REFERENCES

- ASTM Standard D5092, 2004(2010)e1, Standard Practice for Design and Installation of Groundwater Monitoring Wells, ASTM International, West Conshohocken, PA, DOI 10.1520/D5092-04R10E01, www.astm.org
- Diehl, S.F., Goldhaber, M.B., and Hatch, J.R., 2004, Modes of occurrence of mercury and other trace-elements in coals from the warrior field, Black Warrior Basin, Northwestern Alabama, *International Journal of Coal Geology*, v. 59, p. 193-208
- Geological Survey of Alabama (GSA), 2010b, Digital Geologic Map of Alabama, URL: <http://www.gsa.state.al.us/index.html>, accessed November, 2010.
- Goldhaber, M.B., Lee, R.C., Hatch, J.R., Pashin, J.C., and Treworgy, J., 2000, Distribution of a suite of elements including arsenic and mercury in Alabama coal, U.S. Geological Survey Miscellaneous Field Study Map MF-223
- Goldhaber, M.B., Lee, R.C., Hatch, J.R., Pashin, J.C., and Treworgy, J., 2002, The role of large-scale fluid flow in subsurface arsenic enrichment, In: Welch, A., Stollenwerk, K (Eds.), *Arsenic in Ground Water: Occurrence and Geochemistry*, v. 5, p. 127-176
- Jennings, S.P., and Cook, M.R., 2010, A Report to the Hanceville Water Works and Sewer Board, Open File Report 1001
- Pashin, J.C., and Raymond, D.E., 2004, Glacial-eustatic control of coalbed methane reservoir distribution (Pottsville Formation; Lower Pennsylvanian) in the Black Warrior Basin of Alabama: Tuscaloosa, Alabama, University of Alabama College of Continuing Studies, 2004 International Coalbed Methane Symposium Proceedings, Paper 0413, 15 p.
- Pashin, J.C., 2007, Hydrodynamics of Coalbed Methane Reservoirs in the Black Warrior Basin: Key to Understanding Reservoir Performance and Environmental Issues, *Applied Geochemistry*, v. 22, I. 10, p. 2257-2272
- Raymond, D.E., Osborne, W.E., Copeland, C.W. Jr, and Neathery, T.L., 1988, Alabama Stratigraphy: Alabama Geological Survey Circular, v. 140, p. 1-97
- Sapp, C.D., and Emplaincourt, J., 1975, Physiographic regions of Alabama, Special Map 168, Geological Survey of Alabama
- Stricklin, V.E., 1989, Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama: Area 3, U.S. Geological Survey, Water-Resources Investigations Report 88-4120
- U.S. Environmental Protection Agency (EPA), 2004, Evaluation of Sampling and Field-Filtration Methods for the Analysis of Trace Metals In Groundwater Project Summary, EPA/600/SR-94/119
- USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance. Office of Resource Conservation and Recovery – Program Implementation and Information Division. March

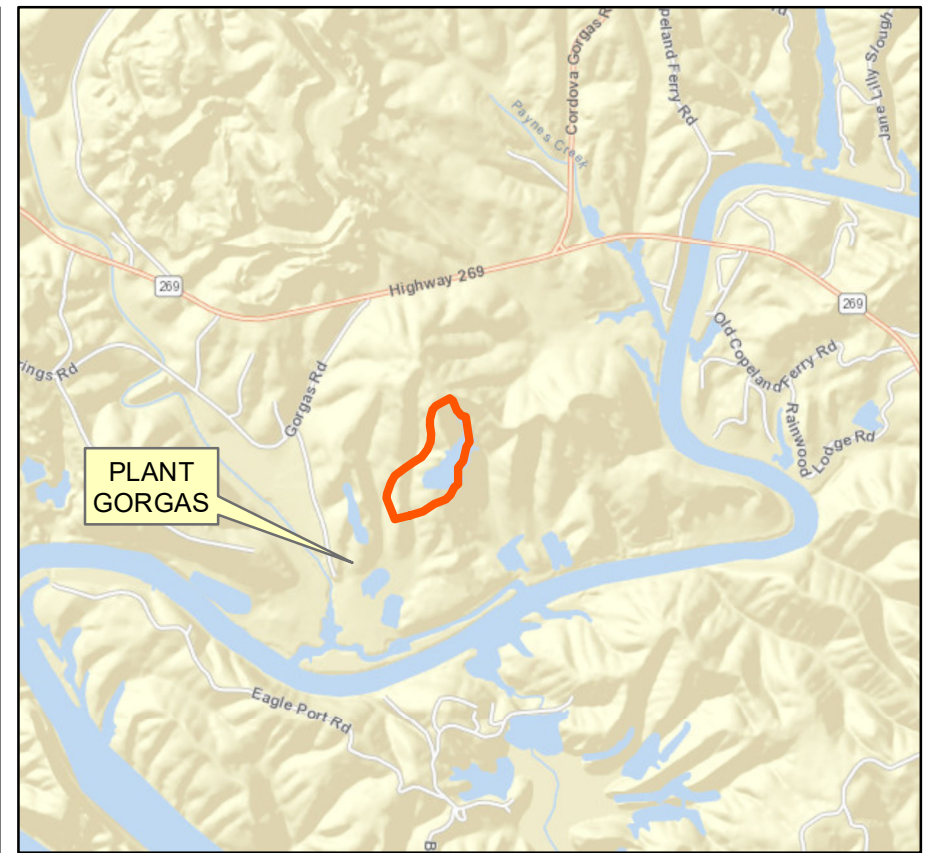
USEPA. 2011. Data Validation Standard Operating Procedures. Science and Ecosystem Support Division. Region IV. September

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

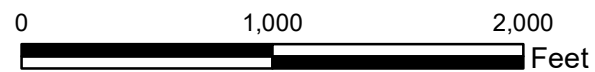
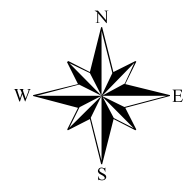
USEPA. 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. *40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule.* [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER].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

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
 Approximate Bottom Ash Landfill Boundary



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

FOR


Alabama Power Company

**PLANT GORGAS
 BOTTOM ASH LANDFILL
 FIGURE 1
 SITE LOCATION MAP**


SCALE	PROJ. I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
		ES4064-S1	1		

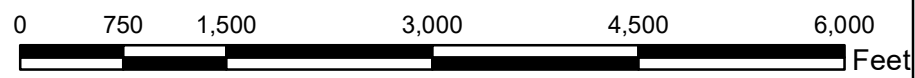
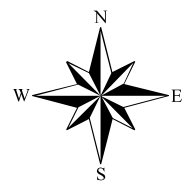


Legend

 Approximate Boundary

Geologic Units

 Pottsville Formation (upper part), Appalachian Plateaus



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**PLANT GORGAS
BOTTOM ASH LANDFILL
FIGURE 2
SITE GEOLOGIC MAP**

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

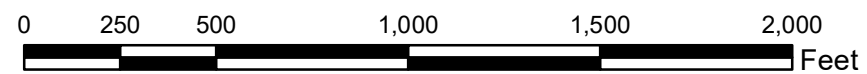
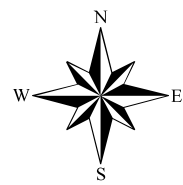
FOR

Alabama Power Company					
SCALE	PROJ I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
		ES4064-S2	1		



Legend

- ◆ Monitoring Well
- Approximate Bottom Ash Landfill Boundary



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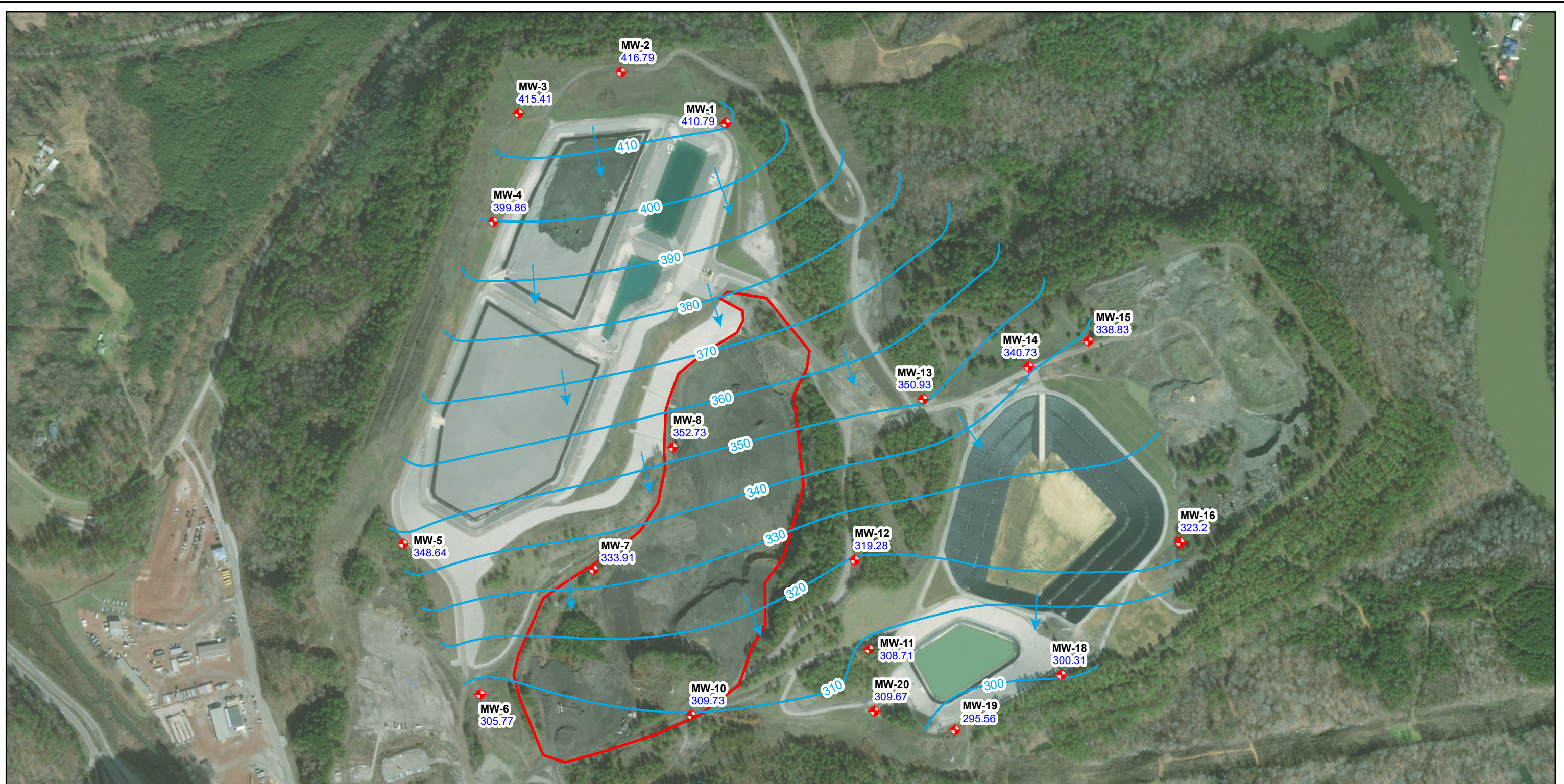
**PLANT GORGAS
BOTTOM ASH LANDFILL
FIGURE 3
MONITORING WELL LOCATION MAP**

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

FOR

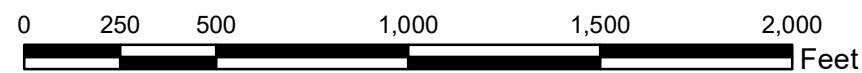
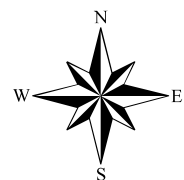
Alabama Power Company

SCALE	PROJ I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
		ES4064-S3	1		



Legend

- ◆ Monitoring Well
- Potentiometric Surface Contour (ft NAVD88)
- Approximate Groundwater Flow Direction
- Approximate Bottom Ash Landfill Boundary



NOTE: NAVD indicates North American Vertical Datum of 1988.

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**PLANT GORGAS
BOTTOM ASH LANDFILL
FIGURE 4
POTENTIOMETRIC SURFACE MAP
NOVEMBER 15, 2017**

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

FOR

Alabama Power Company

SCALE	PROJ I.D.	DRAWING NUMBER	SHEET	CONT'D	REV
		ES4064-S4	1		

Appendix A

Groundwater Analytical Data

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

 Alabama Power



Sample Group : WMWGORLF_22

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_22

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>Chloride Batch ID</u>	<u>Fluoride Batch ID</u>	<u>Sulfate Batch ID</u>	<u>Project ID</u>
AW10922	564770	564773	564776	WMWGORLF_22
AW10923	564770	564773	564776	WMWGORLF_22
AW10924	564770	564773	564776	WMWGORLF_22
AW10925	564770	564773	564776	WMWGORLF_22
AW10926	564770	564773	564776	WMWGORLF_22
AW10927	564770	564773	564776	WMWGORLF_22
AW10928	564770	564773	564776	WMWGORLF_22
AW10929	564770	564773	564776	WMWGORLF_22
AW10930	564770	564773	564776	WMWGORLF_22
AW10931	564770	564773	564776	WMWGORLF_22
AW10932	564771	564774	564777	WMWGORLF_22
AW10933	564771	564774	564777	WMWGORLF_22
AW10934	564771	564774	564777	WMWGORLF_22
AW10936	564771	564774	564777	WMWGORLF_22
AW10937	564771	564774	564777	WMWGORLF_22
AW10938	564771	564774	564777	WMWGORLF_22
AW10939	564771	564774	564777	WMWGORLF_22
AW10941	564771	564774	564777	WMWGORLF_22
AW10942	564771	564774	564777	WMWGORLF_22
AW10943	564771	564774	564777	WMWGORLF_22
AW10944	564772	564775	564778	WMWGORLF_22
AW10945	564772	564775	564778	WMWGORLF_22
AW10946	564772	564775	564778	WMWGORLF_22
AW11047	564772	564775	564778	WMWGORLF_22
AW10947	564407	564408	564409	WMWGORLF_22

4. All of the above samples were analyzed and prepared by EPA 300.0.
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 instrument performance check (IPC) was analyzed and all criteria were met.
- All laboratory reagent blanks were less than the method detection limits for the requested anions.
- All laboratory fortified blanks were within acceptance criteria for the anions requested, with the following exceptions:
 1. An opening LFB for the dilution analyses was run, but no result for sulfate was listed in batch 564776.
 2. No closing LFB was listed for the dilution re-analyses for sulfate in batch 564776. Due to absence of LFB data, the reported results for the following sample dilutions for sulfate are qualified as quantitatively estimated with indeterminate bias direction and magnitude: AW10922, AW10923, AW10924, AW10925, AW10926, AW10927, AW10928, AW10929, AW10930 and AW10931.
 3. The results for the closing LFB for chloride and sulfate, batches 564772 & 564778, were not listed in the lab report. Results for chloride for samples (AW10944 - AW10946, inclusive, and AW11047) should be considered as quantitatively estimated concentrations with indeterminate bias direction. Results for sulfate for undiluted samples (AW10944 - AW10946, inclusive, and AW11047) should be considered as quantitatively estimated concentrations with indeterminate bias direction.
- 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 laboratory fortified matrix (LFM) sample was analyzed with each batch. All acceptance criteria for accuracy were met. It is noted that the LFM for sulfate, in batches 564776 & 564409, was diluted prior to spiking, and the diluted LFM sample was spiked at 50x normal concentration, with acceptable recovery.



- A sample duplicate and/or laboratory fortified matrix duplicate were analyzed with each batch. All acceptance criteria for precision were met. It is noted that separate and distinct criteria for duplicate precision calculations, based on sample and duplicate anion concentrations, are used to assess precision compliance. These are as follow: if the sample and duplicate are both greater than 5x anion Reporting Limit (RL) concentration, the precision is calculated and reported as relative percent difference (RPD), with an acceptance range of 0 - 20%; if either the sample or duplicate are less than 5x anion RL, the precision is calculated and reported as the absolute value of the difference between the two concentrations, with an acceptance range of less than or equal to the anion RL value.
7. Samples AW10922-AW10933, inclusive, AW10936, AW10937, AW10938, AW10939, AW10941, AW10943, AW10944, AW10946, AW11047 and AW10947 were re-analyzed for sulfate at a 50x dilution, due to undiluted results exceeding the calibrated range of the detector. The dilution results for sulfate for these samples should be used; reporting limit (RL) values are adjusted upward to reflect the dilution factor applied.

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AW10922	Sulfate	50X
AW10923	Sulfate	50X
AW10924	Sulfate	50X
AW10925	Sulfate	50X
AW10926	Sulfate	50X
AW10927	Sulfate	50X
AW10928	Sulfate	50X
AW10929	Sulfate	50X
AW10930	Sulfate	50X
AW10931	Sulfate	50X
AW10932	Sulfate	50X
AW10933	Sulfate	50X
AW10936	Sulfate	50X
AW10937	Sulfate	50X
AW10938	Sulfate	50X
AW10939	Sulfate	50X
AW10941	Sulfate	50X
AW10943	Sulfate	50X
AW10944	Sulfate	50X
AW10946	Sulfate	50X
AW11047	Sulfate	50X
AW10947	Sulfate	50X



8. The raw data results are shown with dilution factors included, when dilutions are manually performed by the analyst.

The raw data results are shown without dilution factor corrections, when dilutions are run automatically by the instrument.



Metals ICP

Gorgas Landfill

WMWGORLF_22

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>
AW10922	20160518A	WMWGORLF_22
AW10923	20160518A	WMWGORLF_22
AW10924	20160518A	WMWGORLF_22
AW10925	20160518A	WMWGORLF_22
AW10926	20160518A	WMWGORLF_22
AW10927	20160518A	WMWGORLF_22
AW10928	20160518B	WMWGORLF_22
AW10929	20160518B	WMWGORLF_22
AW10930	20160518B	WMWGORLF_22
AW10931	20160518B	WMWGORLF_22
AW10932	20160518B	WMWGORLF_22
AW10933	20160518B	WMWGORLF_22
AW10934	20160518B	WMWGORLF_22
AW10935	20160518B	WMWGORLF_22
AW10936	20160518B	WMWGORLF_22
AW10937	20160518B	WMWGORLF_22
AW10938	20160523A	WMWGORLF_22
AW10939	20160523A	WMWGORLF_22
AW10941	20160523A	WMWGORLF_22
AW10942	20160523A	WMWGORLF_22
AW10943	20160523A	WMWGORLF_22
AW10944	20160523A	WMWGORLF_22
AW10945	20160523A	WMWGORLF_22
AW10946	20160523A	WMWGORLF_22
AW11047	20160523A	WMWGORLF_22
AW10947	20160518	WMWGORLF_22

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



General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below half the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes except for the following: Samples AW10922 through AW10937 analyzed on 05-17-2016 had a CCV failure. Samples were reanalyzed on 05-18-2016 with passing CCV acceptance criteria.
- All continued calibration blanks (CCB) were below half 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, with the exception of 20160518, which is a dissolved sample and does not get digested.
- 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 exceptions:

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AW10927
Calcium	AW10937
Calcium	AW10947

The concentrations of these analytes in the samples were greater than 3.3X the concentration of the matrix spike added, causing inaccurate spike recovery information. The laboratory control sample indicates that the digestion, if applicable, 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 without a dilution with the following exceptions: The following samples were diluted due to sample concentrations from the undiluted analysis were over the high standard of the calibration curve.

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AW10922	Calcium	10.15x
AW10923	Calcium	10.15x
AW10924	Calcium	10.15x
AW10925	Calcium	10.15x
AW10926	Calcium	10.15x
AW10927	Calcium	10.15x
AW10927MS	Calcium	10.15x
AW10927MSD	Calcium	10.15x
AW10928	Calcium	10.15x
AW10929	Calcium	10.15x
AW10930	Calcium	10.15x
AW10931	Calcium	10.15x
AW10932	Calcium	101.5x
AW10933	Calcium	10.15x
AW10935	Calcium	10.15x
AW10936	Calcium	10.15x
AW10937	Calcium	10.15x
AW10937MS	Calcium	10.15x
AW10937MSD	Calcium	10.15x
AW10938	Calcium	10.15x
AW10939	Calcium	10.15x
AW10941	Calcium	10.15x
AW10943	Calcium	10.15x
AW10944	Calcium	10.15x
AW10946	Calcium	10.15x
AW11047	Calcium	10.15x
AW10947	Calcium	10.15x

8. The raw data results include both results corrected for dilution and results not corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_22

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>
AW10922	564394	WMWGORLF_22
AW10923	564394	WMWGORLF_22
AW10924	564394	WMWGORLF_22
AW10925	564394	WMWGORLF_22
AW10926	564394	WMWGORLF_22
AW10927	564394	WMWGORLF_22
AW10928	564394	WMWGORLF_22
AW10929	564394	WMWGORLF_22
AW10930	564394	WMWGORLF_22
AW10931	564394	WMWGORLF_22
AW10932	564395	WMWGORLF_22
AW10933	564395	WMWGORLF_22
AW10934	564395	WMWGORLF_22
AW10935	564395	WMWGORLF_22
AW10936	564395	WMWGORLF_22
AW10937	564395	WMWGORLF_22
AW10938	564395	WMWGORLF_22
AW10939	564395	WMWGORLF_22
AW10941	564395	WMWGORLF_22
AW10942	564395	WMWGORLF_22
AW10943	564396	WMWGORLF_22
AW10944	564396	WMWGORLF_22
AW10945	564396	WMWGORLF_22
AW10946	564396	WMWGORLF_22
AW11047	564396	WMWGORLF_22
AW10947	564533	WMWGORLF_22

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.



7. Cadmium MDL was increased from 0.0001 mg/L to 0.0002 mg/L. Samples AW10935 and AW11047 are now reported as Not Detected.

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, with the exception of batch 564533, which is a dissolved sample and does not get digested.
- 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.
8. All samples were analyzed at a dilution of 1 to 5 to compensate for any matrix effects.
 9. The raw data results are shown with dilution factors included.



Mercury

Gorgas Landfill

WMWGORLF_22

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>
AW10922	564800	WMWGORLF_22
AW10923	564800	WMWGORLF_22
AW10924	564800	WMWGORLF_22
AW10925	564800	WMWGORLF_22
AW10926	564800	WMWGORLF_22
AW10927	564800	WMWGORLF_22
AW10928	564801	WMWGORLF_22
AW10929	564801	WMWGORLF_22
AW10930	564801	WMWGORLF_22
AW10931	564801	WMWGORLF_22
AW10932	564801	WMWGORLF_22
AW10933	564801	WMWGORLF_22
AW10934	564801	WMWGORLF_22
AW10935	564801	WMWGORLF_22
AW10936	564801	WMWGORLF_22
AW10937	564801	WMWGORLF_22
AW10938	564802	WMWGORLF_22
AW10939	564802	WMWGORLF_22
AW10941	564802	WMWGORLF_22
AW10942	564802	WMWGORLF_22
AW10943	564802	WMWGORLF_22
AW10944	564802	WMWGORLF_22
AW10945	564802	WMWGORLF_22
AW10946	564802	WMWGORLF_22
AW10947	564479	WMWGORLF_22
AW11047	565456	WMWGORLF_22

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_22

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>
AW10922	564197	WMWGORLF_22
AW10923	564197	WMWGORLF_22
AW10924	564197	WMWGORLF_22
AW10925	564197	WMWGORLF_22
AW10926	564197	WMWGORLF_22
AW10927	564197	WMWGORLF_22
AW10928	564197	WMWGORLF_22
AW10929	564197	WMWGORLF_22
AW10930	564197	WMWGORLF_22
AW10931	564197	WMWGORLF_22
AW10932	564197	WMWGORLF_22
AW10933	564197	WMWGORLF_22
AW10934	564197	WMWGORLF_22
AW10936	564197	WMWGORLF_22
AW10937	564197	WMWGORLF_22
AW10938	564197	WMWGORLF_22
AW10939	564197	WMWGORLF_22
AW10941	564197	WMWGORLF_22
AW10942	564197	WMWGORLF_22
AW10943	564288	WMWGORLF_22
AW10944	564288	WMWGORLF_22
AW10945	564288	WMWGORLF_22
AW10946	564288	WMWGORLF_22
AW11047	564288	WMWGORLF_22

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.
7. TDS reporting limit was incorrectly listed as 2.5 mg/L. No sample results were affected.



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 0.5 mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5%. However, the duplicate was analyzed after 19 samples.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- All samples were between 2.5 mg and 200 mg residue with the exception of AW10934, AW10942 and AW10945 which were <2.5mg.

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW10922

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00803	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	J 0.00122	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0280	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	224	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	0.0121	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.232	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00373	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.0964	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	J 0.000205	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	2720	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	1.32	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	J 0.243	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1890	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, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17



Corrected Copy

To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW10922

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10931 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115	95.6	70 to 130	0.0845	20	
AW10927 Lithium, Total	mg/L	0.000402	0.022	0.20	0.351	0.349	0.194	0.17 to 0.23	117	70 to 130	0.496	20	
AW10931 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115	101	70 to 130	0.800	20	
AW10931 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115	85.5	70 to 130	0.218	20	
AW10927 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00396	0.00392	0.00385	0.0034 to 0.0046	99.0	70 to 130	1.02	20	
AW10931 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115	97.0	70 to 130	0.165	20	
AW10931 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115	97.4	70 to 130	0.0972	20	
AW10931 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115	99.1	70 to 130	0.821	20	
AW10931 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115	101	70 to 130	0.450	20	
AW10931 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115	99.9	70 to 130	0.335	20	
AW10927 Boron, Total	mg/L	0.00102	0.044	1.00	1.08	1.09	0.969	0.85 to 1.15	102	70 to 130	0.276	20	
AW10927 Calcium, Total	mg/L	-0.00464	0.22	5.00	310	317	4.83	4.25 to 5.75	60.0	70 to 130	2.23	20	
AW10931 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115	99.0	70 to 130	0.769	20	
AW10931 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115	95.6	70 to 130	2.00	20	
AW10931 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115	92.3	70 to 130	0.0107	20	

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Expiration: June 30, 2017

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW10922

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW10923

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0114	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0414	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	261	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.0528	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	3300	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	1.53	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	0.372	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	2260	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW10923

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10931 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115	101	70 to 130	0.800	20	
AW10931 Cobalt, Total	mg/L	-0.00000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115	95.6	70 to 130	0.0845	20	
AW10927 Lithium, Total	mg/L	0.000402	0.022	0.20	0.351	0.349	0.194	0.17 to 0.23	117	70 to 130	0.496	20	
AW10931 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115	85.5	70 to 130	0.218	20	
AW10927 Boron, Total	mg/L	0.00102	0.044	1.00	1.08	1.09	0.969	0.85 to 1.15	102	70 to 130	0.276	20	
AW10927 Calcium, Total	mg/L	-0.00464	0.22	5.00	310	317	4.83	4.25 to 5.75	60.0	70 to 130	2.23	20	
AW10931 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115	99.0	70 to 130	0.769	20	
AW10931 Cadmium, Total	mg/L	0.00000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115	95.6	70 to 130	2.00	20	
AW10931 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115	92.3	70 to 130	0.0107	20	
AW10931 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115	101	70 to 130	0.450	20	
AW10931 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115	99.9	70 to 130	0.335	20	
AW10927 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00396	0.00392	0.00385	0.0034 to 0.0046	99.0	70 to 130	1.02	20	
AW10931 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115	97.0	70 to 130	0.165	20	
AW10931 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115	97.4	70 to 130	0.0972	20	
AW10931 Thallium, Total	mg/L	0.00000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115	99.1	70 to 130	0.821	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW10923

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

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

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AW10924

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	J 0.00138	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0160	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0301	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	399	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00287	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.0977	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	3660	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	5.44	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	0.307	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	2390	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AW10924

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AW10931	Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115	101	70 to 130	0.800	20
AW10931	Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115	85.5	70 to 130	0.218	20
AW10931	Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115	95.6	70 to 130	0.0845	20
AW10927	Lithium, Total	mg/L	0.000402	0.022	0.20	0.351	0.349	0.194	0.17 to 0.23	117	70 to 130	0.496	20
AW10927	Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00396	0.00392	0.00385	0.0034 to 0.0046	99.0	70 to 130	1.02	20
AW10931	Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115	97.0	70 to 130	0.165	20
AW10931	Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115	97.4	70 to 130	0.0972	20
AW10931	Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115	99.1	70 to 130	0.821	20
AW10931	Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115	95.6	70 to 130	2.00	20
AW10931	Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115	92.3	70 to 130	0.0107	20
AW10927	Boron, Total	mg/L	0.00102	0.044	1.00	1.08	1.09	0.969	0.85 to 1.15	102	70 to 130	0.276	20
AW10927	Calcium, Total	mg/L	-0.00464	0.22	5.00	310	317	4.83	4.25 to 5.75	60.0	70 to 130	2.23	20
AW10931	Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115	99.0	70 to 130	0.769	20
AW10931	Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115	101	70 to 130	0.450	20
AW10931	Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115	99.9	70 to 130	0.335	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AW10924

Sample	Analysis	Units	MB	Sample			LFB		Rec		Prec		
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20

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Expiration: June 30, 2017

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CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AW10925

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00969	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0367	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	342	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0717	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.0702	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	3350	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	1.76	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	0.332	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	2200	mg/L

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AW10925

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit	
			Limit	Spike				Limit	Rec	Limit	Prec			
AW10931 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115		101	70 to 130		0.800	20
AW10931 Cobalt, Total	mg/L	-0.00000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115		95.6	70 to 130		0.0845	20
AW10927 Lithium, Total	mg/L	0.000402	0.022	0.20	0.351	0.349	0.194	0.17 to 0.23		117	70 to 130		0.496	20
AW10931 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115		85.5	70 to 130		0.218	20
AW10931 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115		101	70 to 130		0.450	20
AW10931 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115		99.9	70 to 130		0.335	20
AW10931 Cadmium, Total	mg/L	0.00000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115		95.6	70 to 130		2.00	20
AW10931 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115		92.3	70 to 130		0.0107	20
AW10927 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00396	0.00392	0.00385	0.0034 to 0.0046		99.0	70 to 130		1.02	20
AW10931 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115		97.0	70 to 130		0.165	20
AW10931 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115		97.4	70 to 130		0.0972	20
AW10931 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115		99.1	70 to 130		0.821	20
AW10927 Boron, Total	mg/L	0.00102	0.044	1.00	1.08	1.09	0.969	0.85 to 1.15		102	70 to 130		0.276	20
AW10927 Calcium, Total	mg/L	-0.00464	0.22	5.00	310	317	4.83	4.25 to 5.75		60.0	70 to 130		2.23	20
AW10931 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115		99.0	70 to 130		0.769	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AW10925

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AW10926

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0146	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	0.105	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	368	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.256	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	2690	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	2.66	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	J 0.115	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1650	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AW10926

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit	
			Limit	Spike				Limit	Rec	Limit	Prec			
AW10931 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115		101	70 to 130		0.800	20
AW10927 Lithium, Total	mg/L	0.000402	0.022	0.20	0.351	0.349	0.194	0.17 to 0.23		117	70 to 130		0.496	20
AW10931 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115		85.5	70 to 130		0.218	20
AW10931 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115		95.6	70 to 130		0.0845	20
AW10931 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115		101	70 to 130		0.450	20
AW10931 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115		99.9	70 to 130		0.335	20
AW10931 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115		95.6	70 to 130		2.00	20
AW10931 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115		92.3	70 to 130		0.0107	20
AW10927 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00396	0.00392	0.00385	0.0034 to 0.0046		99.0	70 to 130		1.02	20
AW10931 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115		97.0	70 to 130		0.165	20
AW10931 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115		97.4	70 to 130		0.0972	20
AW10931 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115		99.1	70 to 130		0.821	20
AW10927 Boron, Total	mg/L	0.00102	0.044	1.00	1.08	1.09	0.969	0.85 to 1.15		102	70 to 130		0.276	20
AW10927 Calcium, Total	mg/L	-0.00464	0.22	5.00	310	317	4.83	4.25 to 5.75		60.0	70 to 130		2.23	20
AW10931 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115		99.0	70 to 130		0.769	20

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AW10926

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-9

Laboratory ID Number: AW10927

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0176	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0630	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	307	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.116	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00418	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00743	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	3500	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	1.51	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	J 0.256	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	2210	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Calcium recovery is out of range.
 Spike amount is less than 30% of the sample amount. SGC 10/25/16

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-9

Laboratory ID Number: AW10927

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit	
			Limit	Spike				Limit	Rec	Limit	Prec			
AW10931 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115		101	70 to 130		0.800	20
AW10931 Cobalt, Total	mg/L	-0.00000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115		95.6	70 to 130		0.0845	20
AW10927 Lithium, Total	mg/L	0.000402	0.022	0.20	0.351	0.349	0.194	0.17 to 0.23		117	70 to 130		0.496	20
AW10931 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115		85.5	70 to 130		0.218	20
AW10931 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115		101	70 to 130		0.450	20
AW10931 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115		99.9	70 to 130		0.335	20
AW10927 Boron, Total	mg/L	0.00102	0.044	1.00	1.08	1.09	0.969	0.85 to 1.15		102	70 to 130		0.276	20
AW10927 Calcium, Total	mg/L	-0.00464	0.22	5.00	310	317	4.83	4.25 to 5.75		60.0	70 to 130		2.23	20
AW10931 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115		99.0	70 to 130		0.769	20
AW10927 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00396	0.00392	0.00385	0.0034 to 0.0046		99.0	70 to 130		1.02	20
AW10931 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115		97.0	70 to 130		0.165	20
AW10931 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115		97.4	70 to 130		0.0972	20
AW10931 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115		99.1	70 to 130		0.821	20
AW10931 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115		95.6	70 to 130		2.00	20
AW10931 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115		92.3	70 to 130		0.0107	20

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-9

Laboratory ID Number: AW10927

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample		LFB Limit	Rec		Prec Limit	
							Duplicate	LFB		Rec	Limit		
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20

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 Calcium recovery is out of range.
 Spike amount is less than 30% of the sample amount. SGC 10/25/16

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AW10928

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00912	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0408	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	319	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.0589	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00263	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	3130	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	1.45	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	0.329	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1960	mg/L

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AW10928

Sample Analysis	Units	MB	MB				LFB		Rec		Prec	
			Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	
AW10931 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115	101	70 to 130	0.800	20
AW10931 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115	99.0	70 to 130	0.769	20
AW10931 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115	85.5	70 to 130	0.218	20
AW10937 Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15	99.6	70 to 130	0.00	20
AW10931 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115	101	70 to 130	0.450	20
AW10931 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115	99.9	70 to 130	0.335	20
AW10937 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046	97.5	70 to 130	1.78	20
AW10931 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115	95.6	70 to 130	2.00	20
AW10931 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115	92.3	70 to 130	0.0107	20
AW10937 Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23	112	70 to 130	1.16	20
AW10931 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115	95.6	70 to 130	0.0845	20
AW10937 Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75	60.0	70 to 130	2.35	20
AW10931 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115	97.0	70 to 130	0.165	20
AW10931 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115	97.4	70 to 130	0.0972	20
AW10931 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115	99.1	70 to 130	0.821	20

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AW10928

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20

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To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-18 DUP

Laboratory ID Number: AW10929

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00965	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0441	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	318	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.0591	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00272	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	3060	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	1.45	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	0.329	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1980	mg/L

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 FAX (205) 257-1654

Batch QC Summary



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-18 DUP

Laboratory ID Number: AW10929

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10931 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115	101	70 to 130	0.800	20	
AW10931 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115	99.0	70 to 130	0.769	20	
AW10937 Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15	99.6	70 to 130	0.00	20	
AW10931 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115	85.5	70 to 130	0.218	20	
AW10931 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115	95.6	70 to 130	0.0845	20	
AW10937 Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75	60.0	70 to 130	2.35	20	
AW10931 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115	95.6	70 to 130	2.00	20	
AW10931 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115	92.3	70 to 130	0.0107	20	
AW10937 Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23	112	70 to 130	1.16	20	
AW10931 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115	97.0	70 to 130	0.165	20	
AW10931 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115	97.4	70 to 130	0.0972	20	
AW10931 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115	99.1	70 to 130	0.821	20	
AW10931 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115	101	70 to 130	0.450	20	
AW10931 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115	99.9	70 to 130	0.335	20	
AW10937 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046	97.5	70 to 130	1.78	20	

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Alabama Power General Test Laboratory
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Batch QC Summary



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-18 DUP

Laboratory ID Number: AW10929

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW10930

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00941	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0231	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	147	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	0.00196	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0343	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	J 0.0264	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00261	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	2080	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	1.94	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	J 0.146	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1490	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW10930

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AW10931	Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115	85.5	70 to 130	0.218	20
AW10931	Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115	101	70 to 130	0.800	20
AW10937	Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15	99.6	70 to 130	0.00	20
AW10931	Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115	95.6	70 to 130	0.0845	20
AW10937	Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75	60.0	70 to 130	2.35	20
AW10931	Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115	99.0	70 to 130	0.769	20
AW10931	Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115	101	70 to 130	0.450	20
AW10931	Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115	99.9	70 to 130	0.335	20
AW10937	Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046	97.5	70 to 130	1.78	20
AW10931	Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115	95.6	70 to 130	2.00	20
AW10931	Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115	92.3	70 to 130	0.0107	20
AW10937	Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23	112	70 to 130	1.16	20
AW10931	Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115	97.0	70 to 130	0.165	20
AW10931	Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115	97.4	70 to 130	0.0972	20
AW10931	Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115	99.1	70 to 130	0.821	20

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW10930

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20

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CC:

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Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AW10931

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0108	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0662	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	282	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00436	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.171	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	2480	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	2.34	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	J 0.212	mg/L
* Sulfate, Total	SES	5/2/2016	EPA 300.0		50	15.0	50	1550	mg/L

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Batch QC Summary



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To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AW10931

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit	
			Limit	Spike				Limit	Rec	Limit	Prec			
AW10931 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.101	0.102	0.0937	0.085 to 0.115		101	70 to 130		0.800	20
AW10931 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0963	0.0965	0.0877	0.085 to 0.115		85.5	70 to 130		0.218	20
AW10937 Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15		99.6	70 to 130		0.00	20
AW10931 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0990	0.0998	0.0950	0.085 to 0.115		99.0	70 to 130		0.769	20
AW10931 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0956	0.0975	0.0907	0.085 to 0.115		95.6	70 to 130		2.00	20
AW10931 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0923	0.0923	0.0878	0.085 to 0.115		92.3	70 to 130		0.0107	20
AW10937 Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23		112	70 to 130		1.16	20
AW10931 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.100	0.100	0.0970	0.085 to 0.115		95.6	70 to 130		0.0845	20
AW10937 Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75		60.0	70 to 130		2.35	20
AW10931 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0970	0.0972	0.105	0.085 to 0.115		97.0	70 to 130		0.165	20
AW10931 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0974	0.0973	0.0960	0.085 to 0.115		97.4	70 to 130		0.0972	20
AW10931 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0991	0.0999	0.0949	0.085 to 0.115		99.1	70 to 130		0.821	20
AW10931 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.101	0.102	0.0936	0.085 to 0.115		101	70 to 130		0.450	20
AW10931 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0999	0.0996	0.101	0.085 to 0.115		99.9	70 to 130		0.335	20
AW10937 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046		97.5	70 to 130		1.78	20

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Alabama Power General Test Laboratory
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 Calera, AL 35040
 (205) 664-6032 or 6171
 FAX (205) 257-1654

Batch QC Summary



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AW10931

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10931	Chloride, Total	mg/L	0.00	0.25	10.0	12.3	2.34	9.55	9 to 11	99.6	80 to 120	0.00	20
AW10931	Fluoride, Total	mg/L	0.00	0.3	2.0	2.28	0.209	2.06	1.8 to 2.2	103	80 to 120	1.43	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10931	Sulfate, Total	mg/L	0.165	1.0	1000	2620	1540	20.4	18 to 22	107	80 to 120	0.647	20

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 Calera, AL 35040
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 FAX (205) 257-1654

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AW10932

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	0.00500	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0120	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0750	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		101.5	10	50	411	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0287	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.253	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	3290	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	2.19	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	J 0.131	mg/L
* Sulfate, Total	SES	5/2/2016	EPA 300.0		50	15.0	50	2090	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AW10932

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10937 Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23	112	70 to 130	1.16	20	
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115	88.2	70 to 130	5.31	20	
AW10937 Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75	60.0	70 to 130	2.35	20	
AW10937 Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15	99.6	70 to 130	0.00	20	
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115	82.5	70 to 130	4.74	20	
AW10942 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115	83.3	70 to 130	5.91	20	
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115	85.6	70 to 130	4.61	20	
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115	90.4	70 to 130	5.55	20	
AW10937 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046	97.5	70 to 130	1.78	20	
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115	94.3	70 to 130	4.60	20	
AW10942 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115	88.7	70 to 130	4.23	20	
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115	85.0	70 to 130	5.56	20	
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115	78.2	70 to 130	5.92	20	
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115	79.4	70 to 130	6.12	20	
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115	87.1	70 to 130	3.94	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AW10932

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60		0.0922 5
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05	0.00	2.05	1.8 to 2.2	102 80 to 120 0	20
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87	0.00	9.61	9 to 11	98.7 80 to 120 0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7	0.188	20.1	18 to 22	104 80 to 120 0	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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CC:

Reported: 6/12/2017
 Version: 2.0

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

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AW10933

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0107	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	0.253	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	198	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.163	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00445	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	1640	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	1.71	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	J 0.20	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1050	mg/L

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AW10933

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115		88.2	70 to 130	5.31	20
AW10937 Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23		112	70 to 130	1.16	20
AW10937 Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75		60.0	70 to 130	2.35	20
AW10937 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046		97.5	70 to 130	1.78	20
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115		94.3	70 to 130	4.60	20
AW10942 Thallium, Total	mg/L	0.00000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115		88.7	70 to 130	4.23	20
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115		85.0	70 to 130	5.56	20
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115		78.2	70 to 130	5.92	20
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115		79.4	70 to 130	6.12	20
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115		87.1	70 to 130	3.94	20
AW10937 Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15		99.6	70 to 130	0.00	20
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115		82.5	70 to 130	4.74	20
AW10942 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115		83.3	70 to 130	5.91	20
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115		85.6	70 to 130	4.61	20
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115		90.4	70 to 130	5.55	20

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AW10933

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10922	Solids, Dissolved	mg/L	-6.0	25				2710	48	40 to 60			0.0922	5
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05		0.00	2.05	1.8 to 2.2	102	80 to 120	0	20
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87		0.00	9.61	9 to 11	98.7	80 to 120	0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7		0.188	20.1	18 to 22	104	80 to 120	0	20

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW10934

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	5/2/2016	EPA 300.0		1	0.3	1	U Not Detected	mg/L

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW10934

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10937 Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75	60.0	70 to 130	2.35	20	
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115	88.2	70 to 130	5.31	20	
AW10937 Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23	112	70 to 130	1.16	20	
AW10937 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046	97.5	70 to 130	1.78	20	
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115	94.3	70 to 130	4.60	20	
AW10942 Thallium, Total	mg/L	0.00000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115	88.7	70 to 130	4.23	20	
AW10942 Cobalt, Total	mg/L	-0.00000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115	83.3	70 to 130	5.91	20	
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115	85.6	70 to 130	4.61	20	
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115	90.4	70 to 130	5.55	20	
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115	85.0	70 to 130	5.56	20	
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115	78.2	70 to 130	5.92	20	
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115	79.4	70 to 130	6.12	20	
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115	87.1	70 to 130	3.94	20	
AW10937 Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15	99.6	70 to 130	0.00	20	
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115	82.5	70 to 130	4.74	20	

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Expiration: June 30, 2017

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW10934

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05	0.00	2.05	1.8 to 2.2	102	80 to 120	0	20
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87	0.00	9.61	9 to 11	98.7	80 to 120	0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7	0.188	20.1	18 to 22	104	80 to 120	0	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

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

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW10935

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	0.0568	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0145	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	0.186	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	327	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0720	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.0726	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Cadmium MDL was increased from 0.0001 to 0.0002.
 The result is now Not Detected. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW10935

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115	88.2	70 to 130	5.31	20	
AW10937 Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75	60.0	70 to 130	2.35	20	
AW10937 Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23	112	70 to 130	1.16	20	
AW10937 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046	97.5	70 to 130	1.78	20	
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115	94.3	70 to 130	4.60	20	
AW10942 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115	88.7	70 to 130	4.23	20	
AW10937 Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15	99.6	70 to 130	0.00	20	
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115	82.5	70 to 130	4.74	20	
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115	85.0	70 to 130	5.56	20	
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115	78.2	70 to 130	5.92	20	
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115	79.4	70 to 130	6.12	20	
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115	87.1	70 to 130	3.94	20	
AW10942 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115	83.3	70 to 130	5.91	20	
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115	85.6	70 to 130	4.61	20	
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115	90.4	70 to 130	5.55	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Cadmium MDL was increased from 0.0001 to 0.0002.
 The result is now Not Detected. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW10935

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Cadmium MDL was increased from 0.0001 to 0.0002.
 The result is now Not Detected. SGC 3/17/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW10936

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0134	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0241	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	123	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0487	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	J 0.0353	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		100	1260	mg/L
* Chloride, Total	SES	5/2/2016	EPA 300.0		1	0.04	0.25	1.90	mg/L
* Fluoride, Total	SES	5/2/2016	EPA 300.0		1	0.01	0.3	J 0.149	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	745	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW10936

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115	88.2	70 to 130	5.31	20	
AW10937 Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23	112	70 to 130	1.16	20	
AW10937 Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75	60.0	70 to 130	2.35	20	
AW10937 Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15	99.6	70 to 130	0.00	20	
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115	82.5	70 to 130	4.74	20	
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115	85.0	70 to 130	5.56	20	
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115	78.2	70 to 130	5.92	20	
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115	79.4	70 to 130	6.12	20	
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115	87.1	70 to 130	3.94	20	
AW10942 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115	83.3	70 to 130	5.91	20	
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115	85.6	70 to 130	4.61	20	
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115	90.4	70 to 130	5.55	20	
AW10937 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046	97.5	70 to 130	1.78	20	
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115	94.3	70 to 130	4.60	20	
AW10942 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115	88.7	70 to 130	4.23	20	

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW10936

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05	0.00	2.05	1.8 to 2.2	102	80 to 120	0	20
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87	0.00	9.61	9 to 11	98.7	80 to 120	0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7	0.188	20.1	18 to 22	104	80 to 120	0	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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

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

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AW10937

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0133	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	J 0.0239	mg/L
* Calcium, Total	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	123	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0487	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	J 0.0352	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		100	1270	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	2.07	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	J 0.150	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	742	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Calcium recovery is out of range.
 Spike amount is less than 30% of the sample amount. SGC 10/25/16

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AW10937

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10937 Lithium, Total	mg/L	0.000315	0.022	0.20	0.259	0.256	0.196	0.17 to 0.23	112	70 to 130	1.16	20	
AW10937 Calcium, Total	mg/L	-0.00477	0.22	5.00	126	129	4.79	4.25 to 5.75	60.0	70 to 130	2.35	20	
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115	88.2	70 to 130	5.31	20	
AW10937 Mercury, Total by CVAA	mg/L	0.00007	0.0005	0.00400	0.00390	0.00397	0.00392	0.0034 to 0.0046	97.5	70 to 130	1.78	20	
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115	94.3	70 to 130	4.60	20	
AW10942 Thallium, Total	mg/L	0.00000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115	88.7	70 to 130	4.23	20	
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115	85.0	70 to 130	5.56	20	
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115	78.2	70 to 130	5.92	20	
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115	79.4	70 to 130	6.12	20	
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115	87.1	70 to 130	3.94	20	
AW10937 Boron, Total	mg/L	0.00354	0.044	1.00	1.02	1.02	0.970	0.85 to 1.15	99.6	70 to 130	0.00	20	
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115	82.5	70 to 130	4.74	20	
AW10942 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115	83.3	70 to 130	5.91	20	
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115	85.6	70 to 130	4.61	20	
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115	90.4	70 to 130	5.55	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Calcium recovery is out of range.
 Spike amount is less than 30% of the sample amount. SGC 10/25/16

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 25-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AW10937

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05	0.00	2.05	1.8 to 2.2	102	80 to 120	0	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87	0.00	9.61	9 to 11	98.7	80 to 120	0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7	0.188	20.1	18 to 22	104	80 to 120	0	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Calcium recovery is out of range.
 Spike amount is less than 30% of the sample amount. SGC 10/25/16

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AW10938

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0134	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/23/2016	EPA 200.7		1.015	0.02	0.1	J 0.0585	mg/L
* Calcium, Total	HRG	5/23/2016	EPA 200.7		10.15	1.0	5.0	302	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0205	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.01	0.05	J 0.0184	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	2940	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	1.71	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	J 0.197	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1920	mg/L

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Expiration: June 30, 2017

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AW10938

Sample Analysis	Units	MB	MB				LFB			Rec		Prec
			Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AW12150 Boron, Total	mg/L	-0.00160	0.044	1.00	0.997	1.03	0.967	0.85 to 1.15	99.7	70 to 130	3.26	20
AW10946 Mercury, Total by CVAA	mg/L	0.00006	0.0005	0.00400	0.00394	0.00392	0.00392	0.0034 to 0.0046	98.5	70 to 130	0.509	20
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115	82.5	70 to 130	4.74	20
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115	88.2	70 to 130	5.31	20
AW12150 Calcium, Total	mg/L	-0.0228	0.22	5.00	81.3	80.5	4.98	4.25 to 5.75	112	70 to 130	0.989	20
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115	94.3	70 to 130	4.60	20
AW10942 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115	88.7	70 to 130	4.23	20
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115	85.0	70 to 130	5.56	20
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115	78.2	70 to 130	5.92	20
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115	79.4	70 to 130	6.12	20
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115	87.1	70 to 130	3.94	20
AW12150 Lithium, Total	mg/L	-0.000290	0.022	0.20	0.224	0.227	0.200	0.17 to 0.23	112	70 to 130	1.33	20
AW10942 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115	83.3	70 to 130	5.91	20
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115	85.6	70 to 130	4.61	20
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115	90.4	70 to 130	5.55	20

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AW10938

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec			
			Limit	Limit			Duplicate	LFB	Limit	Limit	Prec	Limit	
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60		0.0922	5	
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05	0.00	2.05	1.8 to 2.2	102	80 to 120	0	20
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87	0.00	9.61	9 to 11	98.7	80 to 120	0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7	0.188	20.1	18 to 22	104	80 to 120	0	20

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Expiration: June 30, 2017

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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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AW10939

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	J 0.00106	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0122	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/23/2016	EPA 200.7		1.015	0.02	0.1	J 0.0491	mg/L
* Calcium, Total	HRG	5/23/2016	EPA 200.7		10.15	1.0	5.0	335	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00716	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.01	0.05	J 0.0373	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	3400	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	1.48	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	J 0.271	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	2150	mg/L

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Expiration: June 30, 2017

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AW10939

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10946 Mercury, Total by CVAA	mg/L	0.00006	0.0005	0.00400	0.00394	0.00392	0.00392	0.0034 to 0.0046	98.5	70 to 130	0.509	20	
AW12150 Boron, Total	mg/L	-0.00160	0.044	1.00	0.997	1.03	0.967	0.85 to 1.15	99.7	70 to 130	3.26	20	
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115	82.5	70 to 130	4.74	20	
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115	88.2	70 to 130	5.31	20	
AW12150 Calcium, Total	mg/L	-0.0228	0.22	5.00	81.3	80.5	4.98	4.25 to 5.75	112	70 to 130	0.989	20	
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115	85.0	70 to 130	5.56	20	
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115	78.2	70 to 130	5.92	20	
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115	79.4	70 to 130	6.12	20	
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115	87.1	70 to 130	3.94	20	
AW12150 Lithium, Total	mg/L	-0.000290	0.022	0.20	0.224	0.227	0.200	0.17 to 0.23	112	70 to 130	1.33	20	
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115	94.3	70 to 130	4.60	20	
AW10942 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115	88.7	70 to 130	4.23	20	
AW10942 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115	83.3	70 to 130	5.91	20	
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115	85.6	70 to 130	4.61	20	
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115	90.4	70 to 130	5.55	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AW10939

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec			
			Limit	Limit			Duplicate	LFB	Limit	Limit			
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05	0.00	2.05	1.8 to 2.2	102	80 to 120	0	20
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87	0.00	9.61	9 to 11	98.7	80 to 120	0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7	0.188	20.1	18 to 22	104	80 to 120	0	20

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Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AW10941

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00969	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/23/2016	EPA 200.7		1.015	0.02	0.1	J 0.0476	mg/L
* Calcium, Total	HRG	5/23/2016	EPA 200.7		10.15	1.0	5.0	257	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0686	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.01	0.05	0.0634	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		125	2540	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	1.11	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	0.379	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1640	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AW10941

Sample Analysis	Units	MB	MB				LFB			Rec		Prec
			Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AW10946 Mercury, Total by CVAA	mg/L	0.00006	0.0005	0.00400	0.00394	0.00392	0.00392	0.0034 to 0.0046	98.5	70 to 130	0.509	20
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115	82.5	70 to 130	4.74	20
AW12150 Boron, Total	mg/L	-0.00160	0.044	1.00	0.997	1.03	0.967	0.85 to 1.15	99.7	70 to 130	3.26	20
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115	88.2	70 to 130	5.31	20
AW12150 Calcium, Total	mg/L	-0.0228	0.22	5.00	81.3	80.5	4.98	4.25 to 5.75	112	70 to 130	0.989	20
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115	94.3	70 to 130	4.60	20
AW10942 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115	88.7	70 to 130	4.23	20
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115	85.0	70 to 130	5.56	20
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115	78.2	70 to 130	5.92	20
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115	79.4	70 to 130	6.12	20
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115	87.1	70 to 130	3.94	20
AW12150 Lithium, Total	mg/L	-0.000290	0.022	0.20	0.224	0.227	0.200	0.17 to 0.23	112	70 to 130	1.33	20
AW10942 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115	83.3	70 to 130	5.91	20
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115	85.6	70 to 130	4.61	20
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115	90.4	70 to 130	5.55	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AW10941

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10922	Solids, Dissolved	mg/L	-6.0	25				2710	48	40 to 60			0.0922	5
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05		0.00	2.05	1.8 to 2.2	102	80 to 120	0	20
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87		0.00	9.61	9 to 11	98.7	80 to 120	0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7		0.188	20.1	18 to 22	104	80 to 120	0	20

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Expiration: June 30, 2017

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CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW10942

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/23/2016	EPA 200.7		1.015	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/2/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		1	0.3	1	U Not Detected	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW10942

Sample Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
		MB	Limit					Limit	Rec	Limit	Prec		
AW10946 Mercury, Total by CVAA	mg/L	0.00006	0.0005	0.00400	0.00394	0.00392	0.00392	0.0034 to 0.0046	98.5	70 to 130	0.509	20	
AW12150 Boron, Total	mg/L	-0.00160	0.044	1.00	0.997	1.03	0.967	0.85 to 1.15	99.7	70 to 130	3.26	20	
AW10942 Cadmium, Total	mg/L	0.000000399	0.00044	0.10	0.0825	0.0865	0.0907	0.085 to 0.115	82.5	70 to 130	4.74	20	
AW10942 Beryllium, Total	mg/L	0.00000199	0.00132	0.10	0.0943	0.0987	0.105	0.085 to 0.115	94.3	70 to 130	4.60	20	
AW10942 Thallium, Total	mg/L	0.000000636	0.00044	0.10	0.0887	0.0925	0.0949	0.085 to 0.115	88.7	70 to 130	4.23	20	
AW10942 Cobalt, Total	mg/L	-0.000000901	0.0044	0.10	0.0833	0.0884	0.0970	0.085 to 0.115	83.3	70 to 130	5.91	20	
AW10942 Molybdenum, Total	mg/L	0.00000468	0.0044	0.10	0.0856	0.0897	0.0936	0.085 to 0.115	85.6	70 to 130	4.61	20	
AW10942 Selenium, Total	mg/L	0.0000266	0.0044	0.10	0.0904	0.0955	0.101	0.085 to 0.115	90.4	70 to 130	5.55	20	
AW10942 Antimony, Total	mg/L	0.0000775	0.00132	0.10	0.0882	0.0930	0.0937	0.085 to 0.115	88.2	70 to 130	5.31	20	
AW12150 Calcium, Total	mg/L	-0.0228	0.22	5.00	81.3	80.5	4.98	4.25 to 5.75	112	70 to 130	0.989	20	
AW10942 Arsenic, Total	mg/L	0.00000611	0.0022	0.10	0.0850	0.0899	0.0950	0.085 to 0.115	85.0	70 to 130	5.56	20	
AW10942 Barium, Total	mg/L	0.00000479	0.0044	0.10	0.0782	0.0830	0.0877	0.085 to 0.115	78.2	70 to 130	5.92	20	
AW10942 Chromium, Total	mg/L	0.00000316	0.0044	0.10	0.0794	0.0844	0.0878	0.085 to 0.115	79.4	70 to 130	6.12	20	
AW10942 Lead, Total	mg/L	0.00000354	0.0022	0.10	0.0871	0.0906	0.0960	0.085 to 0.115	87.1	70 to 130	3.94	20	
AW12150 Lithium, Total	mg/L	-0.000290	0.022	0.20	0.224	0.227	0.200	0.17 to 0.23	112	70 to 130	1.33	20	

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW10942

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	LFB	Rec	Prec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Rec	Limit	Prec	
AW10922	Solids, Dissolved	mg/L	-6.0	25			2710	48	40 to 60			0.0922	5
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05	0.00	2.05	1.8 to 2.2	102	80 to 120	0	20
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87	0.00	9.61	9 to 11	98.7	80 to 120	0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7	0.188	20.1	18 to 22	104	80 to 120	0	20

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW10943

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	J 0.00189	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0110	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/23/2016	EPA 200.7		1.015	0.02	0.1	J 0.0940	mg/L
* Calcium, Total	HRG	5/23/2016	EPA 200.7		10.15	1.0	5.0	400	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.01	0.05	0.212	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/3/2016	SM 2540C		1		125	2800	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	2.16	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	J 0.084	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1750	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW10943

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW11047 Cadmium, Total	mg/L	0.000000422	0.00044	0.10	0.0940	0.0949	0.0896	0.085 to 0.115	94.0	70 to 130	0.955	20	
AW11047 Arsenic, Total	mg/L	0.00000811	0.0022	0.10	0.140	0.142	0.0922	0.085 to 0.115	95.6	70 to 130	0.981	20	
AW10946 Mercury, Total by CVAA	mg/L	0.00006	0.0005	0.00400	0.00394	0.00392	0.00392	0.0034 to 0.0046	98.5	70 to 130	0.509	20	
AW11047 Barium, Total	mg/L	-0.00000158	0.0044	0.10	0.0949	0.0955	0.0870	0.085 to 0.115	84.0	70 to 130	0.669	20	
AW11047 Lead, Total	mg/L	0.00000437	0.0022	0.10	0.0967	0.0972	0.0958	0.085 to 0.115	96.7	70 to 130	0.524	20	
AW11047 Beryllium, Total	mg/L	0.00000539	0.00132	0.10	0.0908	0.0895	0.110	0.085 to 0.115	90.8	70 to 130	1.41	20	
AW11047 Selenium, Total	mg/L	0.0000235	0.0044	0.10	0.0953	0.0955	0.0946	0.085 to 0.115	95.3	70 to 130	0.219	20	
AW12150 Lithium, Total	mg/L	-0.000290	0.022	0.20	0.224	0.227	0.200	0.17 to 0.23	112	70 to 130	1.33	20	
AW11047 Cobalt, Total	mg/L	-0.00000106	0.0044	0.10	0.143	0.144	0.0943	0.085 to 0.115	89.9	70 to 130	0.389	20	
AW12150 Calcium, Total	mg/L	-0.0228	0.22	5.00	81.3	80.5	4.98	4.25 to 5.75	112	70 to 130	0.989	20	
AW11047 Antimony, Total	mg/L	0.0000900	0.00132	0.10	0.0982	0.0984	0.101	0.085 to 0.115	98.2	70 to 130	0.148	20	
AW11047 Chromium, Total	mg/L	0.00000334	0.0044	0.10	0.0882	0.0885	0.0859	0.085 to 0.115	88.2	70 to 130	0.274	20	
AW11047 Molybdenum, Total	mg/L	0.00000760	0.0044	0.10	0.0967	0.0962	0.0994	0.085 to 0.115	96.7	70 to 130	0.509	20	
AW11047 Thallium, Total	mg/L	0.00000180	0.00044	0.10	0.0990	0.0998	0.0951	0.085 to 0.115	99.0	70 to 130	0.855	20	
AW12150 Boron, Total	mg/L	-0.00160	0.044	1.00	0.997	1.03	0.967	0.85 to 1.15	99.7	70 to 130	3.26	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 26-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW10943

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW11047	Solids, Dissolved	mg/L	2.0	25				3745	43.0	40 to 60			0.201	5
AW10942	Fluoride, Total	mg/L	0.00	0.3	2.0	2.05		0.00	2.05	1.8 to 2.2	102	80 to 120	0	20
AW10942	Chloride, Total	mg/L	0.00	0.25	10.0	9.87		0.00	9.61	9 to 11	98.7	80 to 120	0	20
AW10942	Sulfate, Total	mg/L	0.155	1.0	20.0	20.7		0.188	20.1	18 to 22	104	80 to 120	0	20

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CC:

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

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AW10944

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	J 0.00244	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0124	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/23/2016	EPA 200.7		1.015	0.02	0.1	J 0.0425	mg/L
* Calcium, Total	HRG	5/23/2016	EPA 200.7		10.15	1.0	5.0	276	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	J 0.00779	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.01	0.05	J 0.0180	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/3/2016	SM 2540C		1		125	2130	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	2.76	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	J 0.168	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1220	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AW10944

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW11047 Cadmium, Total	mg/L	0.000000422	0.00044	0.10	0.0940	0.0949	0.0896	0.085 to 0.115	94.0	70 to 130	0.955	20	
AW10946 Mercury, Total by CVAA	mg/L	0.00006	0.0005	0.00400	0.00394	0.00392	0.00392	0.0034 to 0.0046	98.5	70 to 130	0.509	20	
AW11047 Arsenic, Total	mg/L	0.00000811	0.0022	0.10	0.140	0.142	0.0922	0.085 to 0.115	95.6	70 to 130	0.981	20	
AW11047 Cobalt, Total	mg/L	-0.00000106	0.0044	0.10	0.143	0.144	0.0943	0.085 to 0.115	89.9	70 to 130	0.389	20	
AW12150 Calcium, Total	mg/L	-0.0228	0.22	5.00	81.3	80.5	4.98	4.25 to 5.75	112	70 to 130	0.989	20	
AW11047 Beryllium, Total	mg/L	0.00000539	0.00132	0.10	0.0908	0.0895	0.110	0.085 to 0.115	90.8	70 to 130	1.41	20	
AW11047 Selenium, Total	mg/L	0.0000235	0.0044	0.10	0.0953	0.0955	0.0946	0.085 to 0.115	95.3	70 to 130	0.219	20	
AW12150 Lithium, Total	mg/L	-0.000290	0.022	0.20	0.224	0.227	0.200	0.17 to 0.23	112	70 to 130	1.33	20	
AW11047 Antimony, Total	mg/L	0.0000900	0.00132	0.10	0.0982	0.0984	0.101	0.085 to 0.115	98.2	70 to 130	0.148	20	
AW11047 Chromium, Total	mg/L	0.00000334	0.0044	0.10	0.0882	0.0885	0.0859	0.085 to 0.115	88.2	70 to 130	0.274	20	
AW11047 Molybdenum, Total	mg/L	0.00000760	0.0044	0.10	0.0967	0.0962	0.0994	0.085 to 0.115	96.7	70 to 130	0.509	20	
AW11047 Thallium, Total	mg/L	0.00000180	0.00044	0.10	0.0990	0.0998	0.0951	0.085 to 0.115	99.0	70 to 130	0.855	20	
AW12150 Boron, Total	mg/L	-0.00160	0.044	1.00	0.997	1.03	0.967	0.85 to 1.15	99.7	70 to 130	3.26	20	
AW11047 Barium, Total	mg/L	-0.00000158	0.0044	0.10	0.0949	0.0955	0.0870	0.085 to 0.115	84.0	70 to 130	0.669	20	
AW11047 Lead, Total	mg/L	0.00000437	0.0022	0.10	0.0967	0.0972	0.0958	0.085 to 0.115	96.7	70 to 130	0.524	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AW10944

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10945	Chloride, Total	mg/L	0.00	0.25	10.0	10.2		0.201		9 to 11	102	80 to 120	0	20
AW10945	Sulfate, Total	mg/L	0.156	1.0	20.0	20.8		0.222		18 to 22	102	80 to 120	34.9	20
AW11047	Solids, Dissolved	mg/L	2.0	25				3745	43.0	40 to 60			0.201	5
AW10945	Fluoride, Total	mg/L	0.00	0.3	2.0	2.17		0.00	2.03	1.8 to 2.2	108	80 to 120	0	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

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

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW10945

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/23/2016	EPA 200.7		1.015	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/3/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		1	0.3	1	J 0.316	mg/L

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Precision for Sulfate was out of range. Both the sample result and QC duplicate are below the RL. SGC 6/7/16

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW10945

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW11047 Cadmium, Total	mg/L	0.000000422	0.00044	0.10	0.0940	0.0949	0.0896	0.085 to 0.115	94.0	70 to 130	0.955	20	
AW11047 Arsenic, Total	mg/L	0.00000811	0.0022	0.10	0.140	0.142	0.0922	0.085 to 0.115	95.6	70 to 130	0.981	20	
AW10946 Mercury, Total by CVAA	mg/L	0.00006	0.0005	0.00400	0.00394	0.00392	0.00392	0.0034 to 0.0046	98.5	70 to 130	0.509	20	
AW11047 Cobalt, Total	mg/L	-0.00000106	0.0044	0.10	0.143	0.144	0.0943	0.085 to 0.115	89.9	70 to 130	0.389	20	
AW12150 Calcium, Total	mg/L	-0.0228	0.22	5.00	81.3	80.5	4.98	4.25 to 5.75	112	70 to 130	0.989	20	
AW11047 Barium, Total	mg/L	-0.00000158	0.0044	0.10	0.0949	0.0955	0.0870	0.085 to 0.115	84.0	70 to 130	0.669	20	
AW11047 Lead, Total	mg/L	0.00000437	0.0022	0.10	0.0967	0.0972	0.0958	0.085 to 0.115	96.7	70 to 130	0.524	20	
AW11047 Beryllium, Total	mg/L	0.00000539	0.00132	0.10	0.0908	0.0895	0.110	0.085 to 0.115	90.8	70 to 130	1.41	20	
AW11047 Selenium, Total	mg/L	0.0000235	0.0044	0.10	0.0953	0.0955	0.0946	0.085 to 0.115	95.3	70 to 130	0.219	20	
AW12150 Lithium, Total	mg/L	-0.000290	0.022	0.20	0.224	0.227	0.200	0.17 to 0.23	112	70 to 130	1.33	20	
AW11047 Antimony, Total	mg/L	0.0000900	0.00132	0.10	0.0982	0.0984	0.101	0.085 to 0.115	98.2	70 to 130	0.148	20	
AW11047 Chromium, Total	mg/L	0.00000334	0.0044	0.10	0.0882	0.0885	0.0859	0.085 to 0.115	88.2	70 to 130	0.274	20	
AW11047 Molybdenum, Total	mg/L	0.00000760	0.0044	0.10	0.0967	0.0962	0.0994	0.085 to 0.115	96.7	70 to 130	0.509	20	
AW11047 Thallium, Total	mg/L	0.00000180	0.00044	0.10	0.0990	0.0998	0.0951	0.085 to 0.115	99.0	70 to 130	0.855	20	
AW12150 Boron, Total	mg/L	-0.00160	0.044	1.00	0.997	1.03	0.967	0.85 to 1.15	99.7	70 to 130	3.26	20	

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Laboratory certification ID: E571114

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Expiration: June 30, 2017

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 Precision for Sulfate was out of range. Both the sample result and QC duplicate are below the RL. SGC 6/7/16

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW10945

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec			Prec
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10945	Chloride, Total	mg/L	0.00	0.25	10.0	10.2	0.201		9 to 11	102	80 to 120	0	20
AW10945	Sulfate, Total	mg/L	0.156	1.0	20.0	20.8	0.222		18 to 22	102	80 to 120	34.9	20
AW10945	Fluoride, Total	mg/L	0.00	0.3	2.0	2.17	0.00	2.03	1.8 to 2.2	108	80 to 120	0	20
AW11047	Solids, Dissolved	mg/L	2.0	25			3745	43.0	40 to 60				0.201 5

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Precision for Sulfate was out of range. Both the sample result and QC duplicate are below the RL. SGC 6/7/16

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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW10946

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	J 0.00196	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0187	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	0.00486	mg/L
* Boron, Total	HRG	5/23/2016	EPA 200.7		1.015	0.02	0.1	0.371	mg/L
* Calcium, Total	HRG	5/23/2016	EPA 200.7		10.15	1.0	5.0	279	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	J 0.000452	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0543	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/6/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.01	0.05	0.435	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/3/2016	SM 2540C		1		125	1940	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	1.46	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	0.337	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	1250	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW10946

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW11047 Cadmium, Total	mg/L	0.000000422	0.00044	0.10	0.0940	0.0949	0.0896	0.085 to 0.115	94.0	70 to 130	0.955	20	
AW10946 Mercury, Total by CVAA	mg/L	0.00006	0.0005	0.00400	0.00394	0.00392	0.00392	0.0034 to 0.0046	98.5	70 to 130	0.509	20	
AW11047 Arsenic, Total	mg/L	0.00000811	0.0022	0.10	0.140	0.142	0.0922	0.085 to 0.115	95.6	70 to 130	0.981	20	
AW11047 Barium, Total	mg/L	-0.00000158	0.0044	0.10	0.0949	0.0955	0.0870	0.085 to 0.115	84.0	70 to 130	0.669	20	
AW11047 Lead, Total	mg/L	0.00000437	0.0022	0.10	0.0967	0.0972	0.0958	0.085 to 0.115	96.7	70 to 130	0.524	20	
AW11047 Cobalt, Total	mg/L	-0.00000106	0.0044	0.10	0.143	0.144	0.0943	0.085 to 0.115	89.9	70 to 130	0.389	20	
AW12150 Calcium, Total	mg/L	-0.0228	0.22	5.00	81.3	80.5	4.98	4.25 to 5.75	112	70 to 130	0.989	20	
AW11047 Antimony, Total	mg/L	0.0000900	0.00132	0.10	0.0982	0.0984	0.101	0.085 to 0.115	98.2	70 to 130	0.148	20	
AW11047 Chromium, Total	mg/L	0.00000334	0.0044	0.10	0.0882	0.0885	0.0859	0.085 to 0.115	88.2	70 to 130	0.274	20	
AW11047 Molybdenum, Total	mg/L	0.00000760	0.0044	0.10	0.0967	0.0962	0.0994	0.085 to 0.115	96.7	70 to 130	0.509	20	
AW11047 Thallium, Total	mg/L	0.00000180	0.00044	0.10	0.0990	0.0998	0.0951	0.085 to 0.115	99.0	70 to 130	0.855	20	
AW12150 Boron, Total	mg/L	-0.00160	0.044	1.00	0.997	1.03	0.967	0.85 to 1.15	99.7	70 to 130	3.26	20	
AW11047 Beryllium, Total	mg/L	0.00000539	0.00132	0.10	0.0908	0.0895	0.110	0.085 to 0.115	90.8	70 to 130	1.41	20	
AW11047 Selenium, Total	mg/L	0.0000235	0.0044	0.10	0.0953	0.0955	0.0946	0.085 to 0.115	95.3	70 to 130	0.219	20	
AW12150 Lithium, Total	mg/L	-0.000290	0.022	0.20	0.224	0.227	0.200	0.17 to 0.23	112	70 to 130	1.33	20	

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW10946

Sample	Analysis	Units	MB	Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW11047	Solids, Dissolved	mg/L	2.0	25			3745	43.0	40 to 60			0.201	5
AW10945	Sulfate, Total	mg/L	0.156	1.0	20.0	20.8	0.222		18 to 22	102	80 to 120	34.9	20
AW10945	Fluoride, Total	mg/L	0.00	0.3	2.0	2.17	0.00	2.03	1.8 to 2.2	108	80 to 120	0	20
AW10945	Chloride, Total	mg/L	0.00	0.25	10.0	10.2	0.201		9 to 11	102	80 to 120	0	20

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Revised Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-10 DISS

Laboratory ID Number: AW10947

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.001	0.005	J 0.00194	mg/L
* Barium, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.002	0.01	0.0187	mg/L
* Beryllium, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.0006	0.003	J 0.00165	mg/L
* Boron, Dissolved	HRG	5/18/2016	EPA 200.7		1.015	0.02	0.1	0.398	mg/L
* Calcium, Dissolved	HRG	5/18/2016	EPA 200.7		10.15	1.0	5.0	274	mg/L
* Cadmium, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.0002	0.001	J 0.000466	mg/L
* Cobalt, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.002	0.01	0.0618	mg/L
* Chromium, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.002	0.01	U Not Detected	mg/L
* Mercury, Dissolved by CVAA	MCW	5/4/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Dissolved	HRG	5/18/2016	EPA 200.7		1.015	0.01	0.05	0.473	mg/L
* Molybdenum, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.002	0.01	U Not Detected	mg/L
* Lead, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.001	0.005	U Not Detected	mg/L
* Selenium, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.002	0.01	U Not Detected	mg/L
* Thallium, Dissolved	RDA	5/9/2016	EPA 200.8		5.025	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Chloride, Dissolved	SES	5/3/2016	EPA 300.0		1	0.04	1	1.46	mg/L
* Fluoride, Dissolved	SES	5/3/2016	EPA 300.0		1	0.01	0.04	0.62	mg/L
* Sulfate, Dissolved	SES	5/3/2016	EPA 300.0		50	2.00	50	1320	mg/L

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Laboratory certification ID: E571114

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Expiration: June 30, 2017

Comments: Recovery for Calcium is out of range.
 Spike amount is less than 30% sample amount. SGC 10/25/16
 REVISED COPY: Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Alabama Power General Test Laboratory
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Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-10 DISS

Laboratory ID Number: AW10947

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW10947	Barium, Dissolved	mg/L	-0.000000916	0.0044	0.10	0.104	0.0969			85.3	70 to 130	7.19	20
AW10947	Antimony, Dissolved	mg/L	0.0000289	0.00132	0.10	0.0966	0.0910			96.6	70 to 130	6.01	20
AW10947	Cadmium, Dissolved	mg/L	0.00	0.00044	0.10	0.0924	0.0851			91.9	70 to 130	8.23	20
AW10947	Lithium, Dissolved	mg/L	0.000311	0.022	0.2	0.682	0.689	0.198	0.17 to 0.23	104	70 to 130	1.02	20
AW10947	Boron, Dissolved	mg/L	0.00396	0.044	1.00	1.38	1.38	0.977	0.85 to 1.15	98.2	70 to 130	0.00	20
AW10947	Calcium, Dissolved	mg/L	-0.00463	0.22	5.00	275	275	4.86	4.25 to 5.75	20.0	70 to 130	0.00	20
AW10947	Mercury, Dissolved by CVAA	mg/L	0.00008	0.0005	0.004	0.00388	0.00389	0.00401	0.0034 to 0.0046	97.0	70 to 130	0.257	20
AW10947	Selenium, Dissolved	mg/L	0.0000138	0.0044	0.10	0.0771	0.0734			77.1	70 to 130	4.92	20
AW10947	Beryllium, Dissolved	mg/L	0.00000527	0.00132	0.10	0.0956	0.0914			94.0	70 to 130	4.55	20
AW10947	Chromium, Dissolved	mg/L	0.00000240	0.0044	0.10	0.0862	0.0821			86.2	70 to 130	4.96	20
AW10947	Lead, Dissolved	mg/L	0.00000138	0.0022	0.10	0.0940	0.0896			94.0	70 to 130	4.76	20
AW10947	Molybdenum, Dissolved	mg/L	0.00000411	0.0044	0.10	0.0960	0.0910			96.0	70 to 130	5.34	20
AW10947	Thallium, Dissolved	mg/L	0.000000982	0.00044	0.10	0.0962	0.0913			96.2	70 to 130	5.28	20
AW10947	Arsenic, Dissolved	mg/L	0.00000133	0.0022	0.10	0.0971	0.0931			95.2	70 to 130	4.18	20
AW10947	Cobalt, Dissolved	mg/L	-0.000000300	0.0044	0.10	0.154	0.145			92.2	70 to 130	5.61	20

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Laboratory certification ID: E571114

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Alabama Power General Test Laboratory
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 (205) 664-6032 or 6171
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Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 27-Apr-16
 Customer ID:
 Delivery Date: 28-Apr-16

Description: Gorgas Landfill - MW-10 DISS

Laboratory ID Number: AW10947

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW10965	Chloride, Dissolved	mg/L	0.000	0.5	500	2680	2100	9.72	9 to 11	117	80 to 120	0.477	20
AW10965	Sulfate, Dissolved	mg/L	0.000	0.5	1000	2920	1800	19.5	18 to 22	112	80 to 120	0.557	20
AW10965	Fluoride, Dissolved	mg/L	0.000	0.02	100	118	14.7	2.04	1.8 to 2.2	103	80 to 120	4.00	20

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CC:

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

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 28-Apr-16
 Customer ID:
 Delivery Date: 29-Apr-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW11047

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	10/26/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	0.0444	mg/L
* Barium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0109	mg/L
* Beryllium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	5/23/2016	EPA 200.7		1.015	0.02	0.1	0.190	mg/L
* Calcium, Total	HRG	5/23/2016	EPA 200.7		10.15	1.0	5.0	349	mg/L
* Cadmium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	0.0531	mg/L
* Chromium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	5/17/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/23/2016	EPA 200.7		1.015	0.01	0.05	0.0735	mg/L
* Molybdenum, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	RDA	5/9/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	RDA	5/9/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	5/3/2016	SM 2540C		1		125	3730	mg/L
* Chloride, Total	SES	5/3/2016	EPA 300.0		1	0.04	0.25	4.12	mg/L
* Fluoride, Total	SES	5/3/2016	EPA 300.0		1	0.01	0.3	J 0.153	mg/L
* Sulfate, Total	SES	5/3/2016	EPA 300.0		50	15.0	50	2360	mg/L

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. The result for Cd has been corrected to Not Detected. 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 28-Apr-16
 Customer ID:
 Delivery Date: 29-Apr-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW11047

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW11047 Cadmium, Total	mg/L	0.000000422	0.00044	0.10	0.0940	0.0949	0.0896	0.085 to 0.115	94.0	70 to 130	0.955	20	
AW11047 Arsenic, Total	mg/L	0.00000811	0.0022	0.10	0.140	0.142	0.0922	0.085 to 0.115	95.6	70 to 130	0.981	20	
AW11047 Beryllium, Total	mg/L	0.00000539	0.00132	0.10	0.0908	0.0895	0.110	0.085 to 0.115	90.8	70 to 130	1.41	20	
AW11047 Selenium, Total	mg/L	0.0000235	0.0044	0.10	0.0953	0.0955	0.0946	0.085 to 0.115	95.3	70 to 130	0.219	20	
AW12150 Lithium, Total	mg/L	-0.000290	0.022	0.20	0.224	0.227	0.200	0.17 to 0.23	112	70 to 130	1.33	20	
AW11047 Barium, Total	mg/L	-0.00000158	0.0044	0.10	0.0949	0.0955	0.0870	0.085 to 0.115	84.0	70 to 130	0.669	20	
AW11047 Lead, Total	mg/L	0.00000437	0.0022	0.10	0.0967	0.0972	0.0958	0.085 to 0.115	96.7	70 to 130	0.524	20	
AW11047 Cobalt, Total	mg/L	-0.00000106	0.0044	0.10	0.143	0.144	0.0943	0.085 to 0.115	89.9	70 to 130	0.389	20	
AW12150 Calcium, Total	mg/L	-0.0228	0.22	5.00	81.3	80.5	4.98	4.25 to 5.75	112	70 to 130	0.989	20	
AW11047 Antimony, Total	mg/L	0.0000900	0.00132	0.10	0.0982	0.0984	0.101	0.085 to 0.115	98.2	70 to 130	0.148	20	
AW11047 Chromium, Total	mg/L	0.00000334	0.0044	0.10	0.0882	0.0885	0.0859	0.085 to 0.115	88.2	70 to 130	0.274	20	
AW11047 Molybdenum, Total	mg/L	0.00000760	0.0044	0.10	0.0967	0.0962	0.0994	0.085 to 0.115	96.7	70 to 130	0.509	20	
AW11047 Thallium, Total	mg/L	0.00000180	0.00044	0.10	0.0990	0.0998	0.0951	0.085 to 0.115	99.0	70 to 130	0.855	20	
AW12150 Boron, Total	mg/L	-0.00160	0.044	1.00	0.997	1.03	0.967	0.85 to 1.15	99.7	70 to 130	3.26	20	
AW12158 Mercury, Total by CVAA	mg/L	0.00003	0.0005	0.00400	0.00350	0.00356	0.00383	0.0034 to 0.0046	87.5	70 to 130	1.70	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 28-Apr-16
 Customer ID:
 Delivery Date: 29-Apr-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW11047

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW11047	Solids, Dissolved	mg/L	2.0	25				3745	43.0	40 to 60			0.201	5
AW10945	Sulfate, Total	mg/L	0.156	1.0	20.0	20.8		0.222		18 to 22	102	80 to 120	34.9	20
AW10945	Chloride, Total	mg/L	0.00	0.25	10.0	10.2		0.201		9 to 11	102	80 to 120	0	20
AW10945	Fluoride, Total	mg/L	0.00	0.3	2.0	2.17		0.00	2.03	1.8 to 2.2	108	80 to 120	0	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. The result for Cd has been corrected to Not Detected. 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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

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: 400-123620-1

TestAmerica Sample Delivery Group: Gorgas Landfill (1)

Client Project/Site: CCR Plant Gorgas

Revision: 1

For:

Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

6/12/2017 12:01:06 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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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: 400-123620-1
SDG: Gorgas Landfill (1)

Job ID: 400-123620-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-123620-1

RAD

Method(s) 9320: Radium-228 Prep Batch 160-262118: Sample 400-123620-C-10-B was run at a reduced volume due to insufficient sample volume available for analysis. Analytical results are reported with the detection limit achieved.

Method(s) PrecSep_0: Radium-228 Prep Batch 160-262118: The following sample was prepared at a reduced aliquot due to limited volume: AW10931 MW-8 (400-123620-10).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-262112: Sample AW10931 MW-8 (400-123620-10) was prepared at a reduced aliquot due to limited volume.

Comments

Report revised per client to remove sample AW10940 (400-123620-27).

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Method Summary

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

TestAmerica Job ID: 400-123620-1
SDG: Gorgas Landfill (1)

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: 400-123620-1
SDG: Gorgas Landfill (1)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-123620-1	AW10922 MW-3	Water	04/25/16 14:25	06/28/16 15:44
400-123620-2	AW10923 MW-4	Water	04/25/16 15:53	06/28/16 15:44
400-123620-3	AW10924 MW-5	Water	04/25/16 17:45	06/28/16 15:44
400-123620-4	AW10925 MW-19	Water	04/26/16 16:46	06/28/16 15:44
400-123620-5	AW10926 MW-20	Water	04/26/16 17:45	06/28/16 15:44
400-123620-6	AW10927 MW-9	Water	04/26/16 12:00	06/28/16 15:44
400-123620-7	AW10928 MW-18	Water	04/26/16 15:01	06/28/16 15:44
400-123620-8	AW10929 MW-18 DUP	Water	04/26/16 15:01	06/28/16 15:44
400-123620-9	AW10930 MW-1	Water	04/26/16 09:44	06/28/16 15:44
400-123620-10	AW10931 MW-8	Water	04/27/16 12:48	06/28/16 15:44
400-123620-11	AW10932 MW-6	Water	04/27/16 10:06	06/28/16 15:44
400-123620-12	AW10933 MW-7	Water	04/27/16 11:53	06/28/16 15:44
400-123620-13	AW10934 FB-2	Water	04/27/16 13:20	06/28/16 15:44
400-123620-14	AW10935 MW-12	Water	04/27/16 14:24	06/28/16 15:44
400-123620-15	AW11665 MW-2	Water	05/05/16 15:55	06/28/16 15:44
400-123620-16	AW10937 MW-2 DUP	Water	04/25/16 12:25	06/28/16 15:44
400-123620-17	AW10938 MW-13	Water	04/26/16 10:45	06/28/16 15:44
400-123620-18	AW10939 MW-14	Water	04/26/16 14:55	06/28/16 15:44
400-123620-19	AW10941 MW-15	Water	04/26/16 16:45	06/28/16 15:44
400-123620-20	AW10942 FB-1	Water	04/26/16 17:17	06/28/16 15:44
400-123620-21	AW10943 MW-11	Water	04/26/16 20:30	06/28/16 15:44
400-123620-22	AW10944 MW-16	Water	04/27/16 11:20	06/28/16 15:44
400-123620-23	AW10945 EB-1	Water	04/27/16 11:53	06/28/16 15:44
400-123620-24	AW10946 MW-10	Water	04/27/16 15:40	06/28/16 15:44
400-123620-25	AW10947 MW-10 DISSOLVED	Water	04/27/16 16:16	06/28/16 15:44
400-123620-26	AW11047 MW-12 RESAMPLE	Water	04/28/16 15:15	06/28/16 15:44

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10922 MW-3

Lab Sample ID: 400-123620-1

Date Collected: 04/25/16 14:25

Matrix: Water

Date Received: 06/28/16 15:44

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		0.0722	0.0729	1.00	0.101	pCi/L	07/05/16 13:58	07/27/16 07:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.5		40 - 110					07/05/16 13:58	07/27/16 07:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.368	U	0.319	0.321	1.00	0.511	pCi/L	07/05/16 14:52	07/21/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.5		40 - 110					07/05/16 14:52	07/21/16 13:05	1
Y Carrier	90.8		40 - 110					07/05/16 14:52	07/21/16 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.484	U	0.327	0.329	5.00	0.511	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10923 MW-4

Lab Sample ID: 400-123620-2

Date Collected: 04/25/16 15:53

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.108		0.0644	0.0651	1.00	0.0880	pCi/L	07/05/16 13:58	07/27/16 07:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					07/05/16 13:58	07/27/16 07:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.327	U	0.289	0.290	1.00	0.464	pCi/L	07/05/16 14:52	07/21/16 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					07/05/16 14:52	07/21/16 13:06	1
Y Carrier	91.6		40 - 110					07/05/16 14:52	07/21/16 13:06	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	0.434	U	0.296	0.297	5.00	0.464	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10924 MW-5

Lab Sample ID: 400-123620-3

Date Collected: 04/25/16 17:45

Matrix: Water

Date Received: 06/28/16 15:44

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		0.0843	0.0853	1.00	0.117	pCi/L	07/05/16 13:58	07/27/16 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.2		40 - 110					07/05/16 13:58	07/27/16 12:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.466	U	0.320	0.323	1.00	0.498	pCi/L	07/05/16 14:52	07/21/16 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.2		40 - 110					07/05/16 14:52	07/21/16 13:06	1
Y Carrier	90.1		40 - 110					07/05/16 14:52	07/21/16 13:06	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	0.611		0.331	0.334	5.00	0.498	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10925 MW-19

Lab Sample ID: 400-123620-4

Date Collected: 04/26/16 16:46

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.242		0.0959	0.0984	1.00	0.104	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	59.5		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.173	U	0.325	0.326	1.00	0.556	pCi/L	07/05/16 14:52	07/21/16 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	59.5		40 - 110					07/05/16 14:52	07/21/16 13:06	1
Y Carrier	87.1		40 - 110					07/05/16 14:52	07/21/16 13:06	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	0.415	U	0.339	0.340	5.00	0.556	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10926 MW-20

Lab Sample ID: 400-123620-5

Date Collected: 04/26/16 17:45

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.350		0.0917	0.0970	1.00	0.0773	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.618		0.306	0.311	1.00	0.456	pCi/L	07/05/16 14:52	07/21/16 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					07/05/16 14:52	07/21/16 13:06	1
Y Carrier	89.3		40 - 110					07/05/16 14:52	07/21/16 13:06	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	0.967		0.319	0.326	5.00	0.456	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10927 MW-9

Lab Sample ID: 400-123620-6

Date Collected: 04/26/16 12:00

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.151		0.0649	0.0663	1.00	0.0730	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.172	U	0.232	0.233	1.00	0.387	pCi/L	07/05/16 14:52	07/21/16 13:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/05/16 14:52	07/21/16 13:07	1
Y Carrier	91.6		40 - 110					07/05/16 14:52	07/21/16 13:07	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	0.323	U	0.241	0.242	5.00	0.387	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10928 MW-18

Lab Sample ID: 400-123620-7

Date Collected: 04/26/16 15:01

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0670	U	0.0695	0.0698	1.00	0.112	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.172	U	0.209	0.210	1.00	0.409	pCi/L	07/05/16 14:52	07/21/16 13:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					07/05/16 14:52	07/21/16 13:08	1
Y Carrier	87.5		40 - 110					07/05/16 14:52	07/21/16 13:08	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	-0.105	U	0.220	0.221	5.00	0.409	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10929 MW-18 DUP

Lab Sample ID: 400-123620-8

Date Collected: 04/26/16 15:01

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0771	U	0.0764	0.0767	1.00	0.123	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.9		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0492	U	0.195	0.195	1.00	0.365	pCi/L	07/05/16 14:52	07/21/16 13:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.9		40 - 110					07/05/16 14:52	07/21/16 13:08	1
Y Carrier	88.2		40 - 110					07/05/16 14:52	07/21/16 13:08	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	0.0280	U	0.209	0.209	5.00	0.365	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10930 MW-1

Lab Sample ID: 400-123620-9

Date Collected: 04/26/16 09:44

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.101		0.0589	0.0596	1.00	0.0783	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.521		0.277	0.281	1.00	0.415	pCi/L	07/05/16 14:52	07/21/16 13:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/05/16 14:52	07/21/16 13:08	1
Y Carrier	90.8		40 - 110					07/05/16 14:52	07/21/16 13:08	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	0.622		0.283	0.287	5.00	0.415	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10931 MW-8

Lab Sample ID: 400-123620-10

Date Collected: 04/27/16 12:48

Matrix: Water

Date Received: 06/28/16 15:44

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	U	0.510	0.511	1.00	0.904	pCi/L	07/26/16 15:20	08/17/16 18:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					07/26/16 15:20	08/17/16 18:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.460	U G	0.656	0.657	1.00	1.28	pCi/L	07/26/16 15:59	08/17/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					07/26/16 15:59	08/17/16 13:37	1
Y Carrier	93.1		40 - 110					07/26/16 15:59	08/17/16 13:37	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	-0.207	U	0.831	0.832	5.00	1.28	pCi/L		08/18/16 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10932 MW-6

Lab Sample ID: 400-123620-11

Date Collected: 04/27/16 10:06

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.380		0.106	0.111	1.00	0.114	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.576		0.271	0.276	1.00	0.393	pCi/L	07/05/16 14:52	07/21/16 13:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					07/05/16 14:52	07/21/16 13:08	1
Y Carrier	90.5		40 - 110					07/05/16 14:52	07/21/16 13:08	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	0.956		0.290	0.297	5.00	0.393	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10933 MW-7

Lab Sample ID: 400-123620-12

Date Collected: 04/27/16 11:53

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0511	U	0.0741	0.0742	1.00	0.125	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.323	U	0.244	0.246	1.00	0.381	pCi/L	07/05/16 14:52	07/21/16 13:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					07/05/16 14:52	07/21/16 13:09	1
Y Carrier	95.0		40 - 110					07/05/16 14:52	07/21/16 13:09	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	0.374	U	0.255	0.257	5.00	0.381	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10934 FB-2

Lab Sample ID: 400-123620-13

Date Collected: 04/27/16 13:20

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0177	U	0.0436	0.0436	1.00	0.0796	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.128	U	0.198	0.198	1.00	0.379	pCi/L	07/05/16 14:52	07/21/16 13:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					07/05/16 14:52	07/21/16 13:09	1
Y Carrier	90.5		40 - 110					07/05/16 14:52	07/21/16 13:09	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	-0.110	U	0.203	0.203	5.00	0.379	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10935 MW-12

Lab Sample ID: 400-123620-14

Date Collected: 04/27/16 14:24

Matrix: Water

Date Received: 06/28/16 15:44

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		0.0815	0.0829	1.00	0.107	pCi/L	07/05/16 13:58	07/27/16 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					07/05/16 13:58	07/27/16 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0849	U	0.202	0.202	1.00	0.349	pCi/L	07/05/16 14:52	07/21/16 13:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					07/05/16 14:52	07/21/16 13:09	1
Y Carrier	91.2		40 - 110					07/05/16 14:52	07/21/16 13:09	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	0.259	U	0.218	0.218	5.00	0.349	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW11665 MW-2

Lab Sample ID: 400-123620-15

Date Collected: 05/05/16 15:55

Matrix: Water

Date Received: 06/28/16 15:44

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		0.0702	0.0712	1.00	0.0920	pCi/L	07/05/16 13:58	07/27/16 16:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					07/05/16 13:58	07/27/16 16:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.206	U	0.225	0.225	1.00	0.441	pCi/L	07/05/16 14:52	07/21/16 13:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					07/05/16 14:52	07/21/16 13:09	1
Y Carrier	92.7		40 - 110					07/05/16 14:52	07/21/16 13:09	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	-0.0718	U	0.235	0.236	5.00	0.441	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10937 MW-2 DUP

Lab Sample ID: 400-123620-16

Date Collected: 04/25/16 12:25

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.104		0.0617	0.0624	1.00	0.0845	pCi/L	07/05/16 13:58	07/27/16 16:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/05/16 13:58	07/27/16 16:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0755	U	0.195	0.195	1.00	0.366	pCi/L	07/05/16 14:52	07/21/16 13:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/05/16 14:52	07/21/16 13:10	1
Y Carrier	93.5		40 - 110					07/05/16 14:52	07/21/16 13:10	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	0.0283	U	0.205	0.205	5.00	0.366	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10938 MW-13

Lab Sample ID: 400-123620-17

Date Collected: 04/26/16 10:45

Matrix: Water

Date Received: 06/28/16 15:44

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		0.0734	0.0744	1.00	0.100	pCi/L	07/05/16 13:58	07/27/16 16:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					07/05/16 13:58	07/27/16 16:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.111	U	0.216	0.216	1.00	0.369	pCi/L	07/05/16 14:52	07/21/16 13:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					07/05/16 14:52	07/21/16 13:10	1
Y Carrier	89.7		40 - 110					07/05/16 14:52	07/21/16 13:10	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	0.245	U	0.228	0.228	5.00	0.369	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10939 MW-14

Lab Sample ID: 400-123620-18

Date Collected: 04/26/16 14:55

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.152		0.0668	0.0682	1.00	0.0766	pCi/L	07/05/16 13:58	07/27/16 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					07/05/16 13:58	07/27/16 16:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.277	U	0.221	0.223	1.00	0.349	pCi/L	07/05/16 14:52	07/21/16 13:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					07/05/16 14:52	07/21/16 13:14	1
Y Carrier	92.0		40 - 110					07/05/16 14:52	07/21/16 13:14	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	0.429		0.231	0.233	5.00	0.349	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10941 MW-15

Lab Sample ID: 400-123620-19

Date Collected: 04/26/16 16:45

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0835		0.0551	0.0556	1.00	0.0761	pCi/L	07/05/16 13:58	07/27/16 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					07/05/16 13:58	07/27/16 16:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0550	U	0.242	0.242	1.00	0.422	pCi/L	07/05/16 14:52	07/21/16 13:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					07/05/16 14:52	07/21/16 13:14	1
Y Carrier	95.0		40 - 110					07/05/16 14:52	07/21/16 13:14	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	0.139	U	0.248	0.249	5.00	0.422	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10942 FB-1

Lab Sample ID: 400-123620-20

Date Collected: 04/26/16 17:17

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0237	U	0.0405	0.0405	1.00	0.0710	pCi/L	07/05/16 13:58	07/27/16 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					07/05/16 13:58	07/27/16 16:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.287	U	0.211	0.212	1.00	0.328	pCi/L	07/05/16 14:52	07/21/16 13:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					07/05/16 14:52	07/21/16 13:14	1
Y Carrier	92.0		40 - 110					07/05/16 14:52	07/21/16 13:14	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	0.311	U	0.215	0.216	5.00	0.328	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10943 MW-11

Lab Sample ID: 400-123620-21

Date Collected: 04/26/16 20:30

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.256		0.0824	0.0855	1.00	0.0848	pCi/L	07/01/16 13:26	07/27/16 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					07/01/16 13:26	07/27/16 12:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.314	U	0.309	0.310	1.00	0.502	pCi/L	07/01/16 13:51	07/21/16 12:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					07/01/16 13:51	07/21/16 12:52	1
Y Carrier	80.7		40 - 110					07/01/16 13:51	07/21/16 12:52	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	0.570		0.320	0.322	5.00	0.502	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10944 MW-16

Lab Sample ID: 400-123620-22

Date Collected: 04/27/16 11:20

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.111		0.0604	0.0612	1.00	0.0803	pCi/L	07/01/16 13:26	07/27/16 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/01/16 13:26	07/27/16 12:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.239	U	0.280	0.281	1.00	0.462	pCi/L	07/01/16 13:51	07/21/16 12:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/01/16 13:51	07/21/16 12:53	1
Y Carrier	83.0		40 - 110					07/01/16 13:51	07/21/16 12:53	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	0.350	U	0.287	0.288	5.00	0.462	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10945 EB-1

Lab Sample ID: 400-123620-23

Date Collected: 04/27/16 11:53

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0190	U	0.0353	0.0354	1.00	0.0792	pCi/L	07/01/16 13:26	07/27/16 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					07/01/16 13:26	07/27/16 12:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0419	U	0.214	0.214	1.00	0.375	pCi/L	07/01/16 13:51	07/21/16 12:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					07/01/16 13:51	07/21/16 12:53	1
Y Carrier	90.8		40 - 110					07/01/16 13:51	07/21/16 12:53	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	0.0229	U	0.216	0.216	5.00	0.375	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10946 MW-10

Lab Sample ID: 400-123620-24

Date Collected: 04/27/16 15:40

Matrix: Water

Date Received: 06/28/16 15:44

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		0.0632	0.0642	1.00	0.0806	pCi/L	07/01/16 13:26	07/27/16 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/01/16 13:26	07/27/16 12:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.190	U	0.251	0.251	1.00	0.417	pCi/L	07/01/16 13:51	07/21/16 12:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/01/16 13:51	07/21/16 12:53	1
Y Carrier	85.6		40 - 110					07/01/16 13:51	07/21/16 12:53	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	0.316	U	0.258	0.259	5.00	0.417	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10947 MW-10 DISSOLVED

Lab Sample ID: 400-123620-25

Date Collected: 04/27/16 16:16

Matrix: Water

Date Received: 06/28/16 15:44

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.102		0.0628	0.0635	1.00	0.0871	pCi/L	07/01/16 13:26	07/27/16 12:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					07/01/16 13:26	07/27/16 12:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.169	U	0.304	0.304	1.00	0.514	pCi/L	07/01/16 13:51	07/21/16 12:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					07/01/16 13:51	07/21/16 12:53	1
Y Carrier	84.9		40 - 110					07/01/16 13:51	07/21/16 12:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.271		0.310	0.311	5.00	0.514	pCi/L		07/30/16 00:14	1

Client Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW11047 MW-12 RESAMPLE

Lab Sample ID: 400-123620-26

Date Collected: 04/28/16 15:15

Matrix: Water

Date Received: 06/28/16 15:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.114		0.0616	0.0625	1.00	0.0815	pCi/L	07/01/16 13:26	07/27/16 12:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.7		40 - 110					07/01/16 13:26	07/27/16 12:31	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.494		0.243	0.247	1.00	0.354	pCi/L	07/01/16 13:51	07/21/16 12:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.7		40 - 110					07/01/16 13:51	07/21/16 12:53	1
Y Carrier	89.7		40 - 110					07/01/16 13:51	07/21/16 12:53	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	0.608		0.251	0.255	5.00	0.354	pCi/L		07/30/16 00:23	1

Definitions/Glossary

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

TestAmerica Job ID: 400-123620-1
SDG: Gorgas Landfill (1)

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: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10922 MW-3

Lab Sample ID: 400-123620-1

Date Collected: 04/25/16 14:25

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262336	07/27/16 07:53	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:05	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10923 MW-4

Lab Sample ID: 400-123620-2

Date Collected: 04/25/16 15:53

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262336	07/27/16 07:53	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:06	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10924 MW-5

Lab Sample ID: 400-123620-3

Date Collected: 04/25/16 17:45

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:06	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10925 MW-19

Lab Sample ID: 400-123620-4

Date Collected: 04/26/16 16:46

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:06	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123620-1
SDG: Gorgas Landfill (1)

Client Sample ID: AW10926 MW-20

Lab Sample ID: 400-123620-5

Date Collected: 04/26/16 17:45

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:06	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10927 MW-9

Lab Sample ID: 400-123620-6

Date Collected: 04/26/16 12:00

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:07	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10928 MW-18

Lab Sample ID: 400-123620-7

Date Collected: 04/26/16 15:01

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:08	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10929 MW-18 DUP

Lab Sample ID: 400-123620-8

Date Collected: 04/26/16 15:01

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:08	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10930 MW-1

Lab Sample ID: 400-123620-9

Date Collected: 04/26/16 09:44

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:08	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10931 MW-8

Lab Sample ID: 400-123620-10

Date Collected: 04/27/16 12:48

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262112	07/26/16 15:20	CMC	TAL SL
Total/NA	Analysis	9315		1	265159	08/17/16 18:50	CMA	TAL SL
Total/NA	Prep	PrecSep_0			262118	07/26/16 15:59	CMC	TAL SL
Total/NA	Analysis	9320		1	265358	08/17/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	265467	08/18/16 14:44	RTM	TAL SL

Client Sample ID: AW10932 MW-6

Lab Sample ID: 400-123620-11

Date Collected: 04/27/16 10:06

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:08	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10933 MW-7

Lab Sample ID: 400-123620-12

Date Collected: 04/27/16 11:53

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:09	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10934 FB-2

Lab Sample ID: 400-123620-13

Date Collected: 04/27/16 13:20

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:09	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10935 MW-12

Lab Sample ID: 400-123620-14

Date Collected: 04/27/16 14:24

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:09	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW11665 MW-2

Lab Sample ID: 400-123620-15

Date Collected: 05/05/16 15:55

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 16:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:09	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10937 MW-2 DUP

Lab Sample ID: 400-123620-16

Date Collected: 04/25/16 12:25

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 16:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:10	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10938 MW-13

Lab Sample ID: 400-123620-17

Date Collected: 04/26/16 10:45

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 16:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261532	07/21/16 13:10	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10939 MW-14

Lab Sample ID: 400-123620-18

Date Collected: 04/26/16 14:55

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 16:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261534	07/21/16 13:14	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10941 MW-15

Lab Sample ID: 400-123620-19

Date Collected: 04/26/16 16:45

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 16:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261534	07/21/16 13:14	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10942 FB-1

Lab Sample ID: 400-123620-20

Date Collected: 04/26/16 17:17

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259216	07/05/16 13:58	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 16:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259229	07/05/16 14:52	MCJ	TAL SL
Total/NA	Analysis	9320		1	261534	07/21/16 13:14	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123620-1
SDG: Gorgas Landfill (1)

Client Sample ID: AW10943 MW-11

Lab Sample ID: 400-123620-21

Date Collected: 04/26/16 20:30

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			258920	07/01/16 13:26	MCJ	TAL SL
Total/NA	Analysis	9315		1	262336	07/27/16 12:25	RTM	TAL SL
Total/NA	Prep	PrecSep_0			258924	07/01/16 13:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	261535	07/21/16 12:52	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10944 MW-16

Lab Sample ID: 400-123620-22

Date Collected: 04/27/16 11:20

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			258920	07/01/16 13:26	MCJ	TAL SL
Total/NA	Analysis	9315		1	262336	07/27/16 12:25	RTM	TAL SL
Total/NA	Prep	PrecSep_0			258924	07/01/16 13:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	261535	07/21/16 12:53	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10945 EB-1

Lab Sample ID: 400-123620-23

Date Collected: 04/27/16 11:53

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			258920	07/01/16 13:26	MCJ	TAL SL
Total/NA	Analysis	9315		1	262336	07/27/16 12:25	RTM	TAL SL
Total/NA	Prep	PrecSep_0			258924	07/01/16 13:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	261535	07/21/16 12:53	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW10946 MW-10

Lab Sample ID: 400-123620-24

Date Collected: 04/27/16 15:40

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			258920	07/01/16 13:26	MCJ	TAL SL
Total/NA	Analysis	9315		1	262336	07/27/16 12:25	RTM	TAL SL
Total/NA	Prep	PrecSep_0			258924	07/01/16 13:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	261535	07/21/16 12:53	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Client Sample ID: AW10947 MW-10 DISSOLVED

Lab Sample ID: 400-123620-25

Date Collected: 04/27/16 16:16

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	PrecSep-21			258920	07/01/16 13:26	MCJ	TAL SL
Dissolved	Analysis	9315		1	262337	07/27/16 12:31	RTM	TAL SL
Dissolved	Prep	PrecSep_0			258924	07/01/16 13:51	MCJ	TAL SL
Dissolved	Analysis	9320		1	261535	07/21/16 12:53	ALS	TAL SL
Dissolved	Analysis	Ra226_Ra228		1	262765	07/30/16 00:14	RTM	TAL SL

Client Sample ID: AW11047 MW-12 RESAMPLE

Lab Sample ID: 400-123620-26

Date Collected: 04/28/16 15:15

Matrix: Water

Date Received: 06/28/16 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			258920	07/01/16 13:26	MCJ	TAL SL
Total/NA	Analysis	9315		1	262337	07/27/16 12:31	RTM	TAL SL
Total/NA	Prep	PrecSep_0			258924	07/01/16 13:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	261535	07/21/16 12:53	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	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: 400-123620-1
 SDG: Gorgas Landfill (1)

Rad

Prep Batch: 258920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123620-21	AW10943 MW-11	Total/NA	Water	PrecSep-21	
400-123620-22	AW10944 MW-16	Total/NA	Water	PrecSep-21	
400-123620-23	AW10945 EB-1	Total/NA	Water	PrecSep-21	
400-123620-24	AW10946 MW-10	Total/NA	Water	PrecSep-21	
400-123620-25	AW10947 MW-10 DISSOLVED	Dissolved	Water	PrecSep-21	
400-123620-26	AW11047 MW-12 RESAMPLE	Total/NA	Water	PrecSep-21	
MB 160-258920/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-258920/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-123619-C-24-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 258924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123620-21	AW10943 MW-11	Total/NA	Water	PrecSep_0	
400-123620-22	AW10944 MW-16	Total/NA	Water	PrecSep_0	
400-123620-23	AW10945 EB-1	Total/NA	Water	PrecSep_0	
400-123620-24	AW10946 MW-10	Total/NA	Water	PrecSep_0	
400-123620-25	AW10947 MW-10 DISSOLVED	Dissolved	Water	PrecSep_0	
400-123620-26	AW11047 MW-12 RESAMPLE	Total/NA	Water	PrecSep_0	
MB 160-258924/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-258924/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-123619-C-24-B DU	Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 259216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123620-1	AW10922 MW-3	Total/NA	Water	PrecSep-21	
400-123620-2	AW10923 MW-4	Total/NA	Water	PrecSep-21	
400-123620-3	AW10924 MW-5	Total/NA	Water	PrecSep-21	
400-123620-4	AW10925 MW-19	Total/NA	Water	PrecSep-21	
400-123620-5	AW10926 MW-20	Total/NA	Water	PrecSep-21	
400-123620-6	AW10927 MW-9	Total/NA	Water	PrecSep-21	
400-123620-7	AW10928 MW-18	Total/NA	Water	PrecSep-21	
400-123620-8	AW10929 MW-18 DUP	Total/NA	Water	PrecSep-21	
400-123620-9	AW10930 MW-1	Total/NA	Water	PrecSep-21	
400-123620-11	AW10932 MW-6	Total/NA	Water	PrecSep-21	
400-123620-12	AW10933 MW-7	Total/NA	Water	PrecSep-21	
400-123620-13	AW10934 FB-2	Total/NA	Water	PrecSep-21	
400-123620-14	AW10935 MW-12	Total/NA	Water	PrecSep-21	
400-123620-15	AW11665 MW-2	Total/NA	Water	PrecSep-21	
400-123620-16	AW10937 MW-2 DUP	Total/NA	Water	PrecSep-21	
400-123620-17	AW10938 MW-13	Total/NA	Water	PrecSep-21	
400-123620-18	AW10939 MW-14	Total/NA	Water	PrecSep-21	
400-123620-19	AW10941 MW-15	Total/NA	Water	PrecSep-21	
400-123620-20	AW10942 FB-1	Total/NA	Water	PrecSep-21	
MB 160-259216/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-259216/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-123620-6 DU	AW10927 MW-9	Total/NA	Water	PrecSep-21	

Prep Batch: 259229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123620-1	AW10922 MW-3	Total/NA	Water	PrecSep_0	
400-123620-2	AW10923 MW-4	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Rad (Continued)

Prep Batch: 259229 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123620-3	AW10924 MW-5	Total/NA	Water	PrecSep_0	
400-123620-4	AW10925 MW-19	Total/NA	Water	PrecSep_0	
400-123620-5	AW10926 MW-20	Total/NA	Water	PrecSep_0	
400-123620-6	AW10927 MW-9	Total/NA	Water	PrecSep_0	
400-123620-7	AW10928 MW-18	Total/NA	Water	PrecSep_0	
400-123620-8	AW10929 MW-18 DUP	Total/NA	Water	PrecSep_0	
400-123620-9	AW10930 MW-1	Total/NA	Water	PrecSep_0	
400-123620-11	AW10932 MW-6	Total/NA	Water	PrecSep_0	
400-123620-12	AW10933 MW-7	Total/NA	Water	PrecSep_0	
400-123620-13	AW10934 FB-2	Total/NA	Water	PrecSep_0	
400-123620-14	AW10935 MW-12	Total/NA	Water	PrecSep_0	
400-123620-15	AW11665 MW-2	Total/NA	Water	PrecSep_0	
400-123620-16	AW10937 MW-2 DUP	Total/NA	Water	PrecSep_0	
400-123620-17	AW10938 MW-13	Total/NA	Water	PrecSep_0	
400-123620-18	AW10939 MW-14	Total/NA	Water	PrecSep_0	
400-123620-19	AW10941 MW-15	Total/NA	Water	PrecSep_0	
400-123620-20	AW10942 FB-1	Total/NA	Water	PrecSep_0	
MB 160-259229/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-259229/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-123620-6 DU	AW10927 MW-9	Total/NA	Water	PrecSep_0	

Prep Batch: 262112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123620-10	AW10931 MW-8	Total/NA	Water	PrecSep-21	
MB 160-262112/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-262112/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-67440-B-2-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	
240-67440-B-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 262118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123620-10	AW10931 MW-8	Total/NA	Water	PrecSep_0	
MB 160-262118/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-262118/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-67440-B-2-C MS	Matrix Spike	Total/NA	Water	PrecSep_0	
240-67440-B-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-258920/1-A
Matrix: Water
Analysis Batch: 262071

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 258920

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.008703	U	0.0446	0.0446	1.00	0.0846	pCi/L	07/01/16 13:26	07/26/16 17:32	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	90.3		40 - 110	07/01/16 13:26	07/26/16 17:32	1				

Lab Sample ID: LCS 160-258920/2-A
Matrix: Water
Analysis Batch: 262071

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 258920

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.2	14.36		1.39	1.00	0.0686	pCi/L	129	68 - 137
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed				
Ba Carrier	96.0		40 - 110	07/01/16 13:26	07/26/16 17:32	1			

Lab Sample ID: 400-123619-C-24-A DU
Matrix: Water
Analysis Batch: 262071

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 258920

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.677		0.7601		0.146	1.00	0.0796	pCi/L	0.30	1
Carrier	DU DU		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	98.0		40 - 110	07/01/16 13:26	07/26/16 17:32	1				

Lab Sample ID: MB 160-259216/1-A
Matrix: Water
Analysis Batch: 262336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259216

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04101	U	0.0462	0.0464	1.00	0.0748	pCi/L	07/05/16 13:58	07/27/16 07:53	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	92.0		40 - 110	07/05/16 13:58	07/27/16 07:53	1				

Lab Sample ID: LCS 160-259216/2-A
Matrix: Water
Analysis Batch: 262336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259216

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.2	14.51		1.41	1.00	0.0848	pCi/L	130	68 - 137

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

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

Lab Sample ID: LCS 160-259216/2-A
Matrix: Water
Analysis Batch: 262336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259216

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	87.2		40 - 110

Lab Sample ID: 400-123620-6 DU
Matrix: Water
Analysis Batch: 262337

Client Sample ID: AW10927 MW-9
Prep Type: Total/NA
Prep Batch: 259216

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.151		0.1158		0.0634	1.00	0.0805	pCi/L	0.27	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	89.5		40 - 110

Lab Sample ID: MB 160-262112/1-A
Matrix: Water
Analysis Batch: 265159

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262112

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02793	U	0.120	0.120	1.00	0.249	pCi/L	07/26/16 15:20	08/17/16 18:48	1

	MB	MB	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	80.6		40 - 110

	Prepared	Analyzed	Dil Fac
Ba Carrier	07/26/16 15:20	08/17/16 18:48	1

Lab Sample ID: LCS 160-262112/2-A
Matrix: Water
Analysis Batch: 265159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262112

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	14.96		1.63	1.00	0.222	pCi/L	134	68 - 137

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	78.6		40 - 110

Lab Sample ID: 240-67440-B-2-A MS
Matrix: Water
Analysis Batch: 265409

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 262112

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.176	U	11.2	14.56		1.54	1.00	0.221	pCi/L	130	75 - 138

	MS	MS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	79.8		40 - 110

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

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

Lab Sample ID: 240-67440-B-2-B MSD
Matrix: Water
Analysis Batch: 265159

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 262112

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.176	U	11.2	13.94		1.54	1.00	0.229	pCi/L	125	75 - 138	0.20	1
Carrier	%Yield	MSD Qualifier	MSD Limits										
Ba Carrier	82.1		40 - 110										

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-258924/1-A
Matrix: Water
Analysis Batch: 261534

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 258924

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1735	U	0.217	0.218	1.00	0.360	pCi/L	07/01/16 13:51	07/21/16 12:56	1
Carrier	%Yield	MB Qualifier	MB Limits							
Ba Carrier	90.3		40 - 110							
Y Carrier	86.7		40 - 110							
								Prepared	Analyzed	Dil Fac
								07/01/16 13:51	07/21/16 12:56	1
								07/01/16 13:51	07/21/16 12:56	1

Lab Sample ID: LCS 160-258924/2-A
Matrix: Water
Analysis Batch: 261534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 258924

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.8	18.03		1.89	1.00	0.363	pCi/L	122	56 - 140
Carrier	%Yield	LCS Qualifier	LCS Limits						
Ba Carrier	96.0		40 - 110						
Y Carrier	84.5		40 - 110						

Lab Sample ID: 400-123619-C-24-B DU
Matrix: Water
Analysis Batch: 261534

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 258924

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.872		0.4269		0.257	1.00	0.385	pCi/L	0.81	1
Carrier	%Yield	DU Qualifier	DU Limits							
Ba Carrier	98.0		40 - 110							
Y Carrier	81.9		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

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

Lab Sample ID: MB 160-259229/1-A
Matrix: Water
Analysis Batch: 261532

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259229

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.1390	U	0.222	0.222	1.00	0.417	pCi/L	07/05/16 14:52	07/21/16 13:04	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	92.0		40 - 110		07/05/16 14:52	07/21/16 13:04	1			
Y Carrier	89.7		40 - 110		07/05/16 14:52	07/21/16 13:04	1			

Lab Sample ID: LCS 160-259229/2-A
Matrix: Water
Analysis Batch: 261532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259229

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-228	14.8	20.02		2.08	1.00	0.431	pCi/L	135	56 - 140
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier							
Ba Carrier	87.2		40 - 110						
Y Carrier	90.1		40 - 110						

Lab Sample ID: 400-123620-6 DU
Matrix: Water
Analysis Batch: 261532

Client Sample ID: AW10927 MW-9
Prep Type: Total/NA
Prep Batch: 259229

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-228	0.172	U	0.2720	U	0.251	1.00	0.403	pCi/L	0.21	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	89.5		40 - 110							
Y Carrier	90.1		40 - 110							

Lab Sample ID: MB 160-262118/1-A
Matrix: Water
Analysis Batch: 265358

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262118

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.008937	U	0.249	0.249	1.00	0.444	pCi/L	07/26/16 15:59	08/17/16 13:33	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	80.6		40 - 110		07/26/16 15:59	08/17/16 13:33	1			
Y Carrier	92.0		40 - 110		07/26/16 15:59	08/17/16 13:33	1			

QC Sample Results

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

TestAmerica Job ID: 400-123620-1
 SDG: Gorgas Landfill (1)

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

Lab Sample ID: LCS 160-262118/2-A
Matrix: Water
Analysis Batch: 265358

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262118

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.7	16.42		1.76	1.00	0.454	pCi/L	112	56 - 140
LCS LCS									
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	78.6		40 - 110						
Y Carrier	92.0		40 - 110						

Lab Sample ID: 240-67440-B-2-C MS
Matrix: Water
Analysis Batch: 265358

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 262118


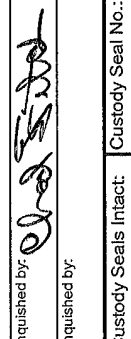
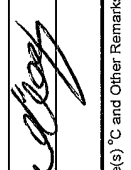
Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	-0.0212	U	14.7	16.40		1.77	1.00	0.431	pCi/L	112	45 - 150
MS MS											
Carrier	%Yield	Qualifier	Limits								
Ba Carrier	79.8		40 - 110								
Y Carrier	88.6		40 - 110								

Lab Sample ID: 240-67440-B-2-D MSD
Matrix: Water
Analysis Batch: 265358

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 262118

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	-0.0212	U	14.7	15.70		1.67	1.00	0.371	pCi/L	107	45 - 150	0.21	1
MSD MSD													
Carrier	%Yield	Qualifier	Limits										
Ba Carrier	82.1		40 - 110										
Y Carrier	96.1		40 - 110										

Chain of Custody Record

Client Information		Lab P/M: Whitmire, Cheyenne R.	Carrier Tracking No(s): 400-56525-24537.1
Client Contact: Sarah Copeland		Phone: 205-664-6121	Page: Page 1 of 4
Company: Alabama Power General Test Laboratory		E-Mail: cheyenne.whitmire@testamericainc.com	Job #: 400-223620
Address: 744 County Rd 87 GSC #8		Due Date Requested:	 400-123620 COC
City: Calera	State, Zip: AL, 35040	TAT Requested (days): Routine	
Phone: 205-664-6121(Tel)	PO #:	Project #: 40007143	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:
Email: scopela@southernco.com	WO #:	SSOW#:	
Project Name: CCR		Special Instructions/Note:	
Site: Gorgas Landfill (1)		Total Number of Containers	
Sample Identification		Analysis Requested	
	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)
AW10922	4/25/16	1425	G Water
AW10923	4/25/16	1553	G Water
AW10924	4/25/16	1745	G Water
AW10925	4/26/16	1646	G Water
AW10926	4/26/16	1745	G Water
AW10927	4/26/16	1200	G Water
AW10928	4/26/16	1501	G Water
AW10929	4/26/16	1501	G Water
AW10930	4/26/16	0944	G Water
AW10931	4/27/16	1248	G Water
Preservation Codes <input type="checkbox"/> MW-3 <input type="checkbox"/> MW-4 <input type="checkbox"/> MW-5 <input type="checkbox"/> MW-19 <input type="checkbox"/> MW-20 <input type="checkbox"/> MW-9 <input type="checkbox"/> MW-18 <input type="checkbox"/> MW-18 Dup (Sample Duplicate) <input type="checkbox"/> MW-1 <input type="checkbox"/> MW-8			
Possible Hazard Identification <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: _____ Relinquished by: Sarah Copeland Date/Time: 6/27/16; 1100			
Relinquished by:  Date/Time: 6/27/16 15:44 Company: APC			
Relinquished by:  Date/Time: 6/28/16 15:44 Company: TPA			
Custody Seal No.: _____ Δ Yes Δ No			
Cooler Temperature(s) °C and Other Remarks: _____			
Special Instructions/QC Requirements: <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			

Client Information		Sampler: Clarence Specht		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s): 400-56525-24537.1	
Client Contact: Sarah Copeland		Phone: 205-664-6121		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 2 of 4 Job #:	
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 (1)							
Due Date Requested:		TAT Requested (days): Routine		Field Filtered Sample (Yes or No)		Total Number of Containers	
PO #:	WO #:	Project #:	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)	Preservation Code
		40007143	4/27/16	1006	G	Water	MW-6
			4/27/16	1153	G	Water	MW-7
			4/27/16	1320	G	Water	FB-2 (Field Blank)
			4/27/16	1424	G	Water	MW-12
Sample Identification AW10932 AW10933 AW10934 AW10935							
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Unknown <input type="checkbox"/> Poison B <input type="checkbox"/> Radiological							
Deliverable Requested: I, II, III, IV, Other (specify) _____ Empty Kit Relinquished by: _____ Date: _____ Relinquished by: Sarah Copeland Date/Time: 6/27/16; 1100 Relinquished by: <i>John Smith</i> Date/Time: 6/28/16 15:44 Relinquished by: _____ Date/Time: _____							
Special Instructions/QC Requirements:				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: _____			
Method of Shipment: _____ Received by: _____ Date/Time: _____ Received by: <i>Blayne Kelly</i> Date/Time: 6/28/16 15:44 Received by: _____ Date/Time: _____ Cooler Temperature(s) °C and Other Remarks: _____							
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: _____					



Chain of Custody Record

Client Information		Sampler: Jason Rouss		Lab PM: Whitmore, Cheyenne R		Carrier Tracking No(s): 400-56525-24537.1				
Client Contact: Sarah Copeland		Phone: 205-664-6121		E-Mail: cheyenne.whitmore@testamericainc.com		Page 3 of 4				
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		City: Calera		Job #:				
State, Zip: AL, 35040		Phone: 205-664-6121 (Tel)		PO #:		Preservation Codes:				
Email: sgcopela@southernco.com		WO #:		Project #: 40007143		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:				
CCR		SSOW#:		Site: Gorgas Landfill (1)		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)				
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note:
AW11665		5/5/16	1555	G	Water	X	X		2	MW-2
AW10937		4/25/16	1225	G	Water	X	X		2	MW-2 Dup (Sample Duplicate)
AW10938		4/26/16	1045	G	Water	X	X		2	MW-13
AW10939		4/26/16	1455	G	Water	X	X		1	MW-14 (AW10940 is QC point)
AW10941		4/26/16	1645	G	Water	X	X		2	MW-15
AW10942		4/26/16	1717	G	Water	X	X		2	FB-1 (Field Blank)
AW10943		4/26/16	2030	G	Water	X	X		2	MW-11
AW10944		4/27/16	1120	G	Water	X	X		2	MW-16
AW10945		4/27/16	1153	G	Water	X	X		2	EB-1 (Equipment Blank)
Possible Hazard Identification <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: 6/27/16; 1100 Relinquished by: <i>Sarah Copeland</i> Date/Time: 6/28/16 1544 Company: APC Relinquished by: <i>Whitmore</i> Date/Time: 6/28/16 15:44 Company: <i>TA</i>										
Special Instructions/QC Requirements: <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)										
Cooler Temperature(s) °C and Other Remarks:										



Chain of Custody Record

<p>Client Information Client Contact: Sarah Copeland Phone: 205-664-6121</p>			<p>Sampler: Jason Rouss Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com</p>		<p>COC No: 400-56525-24537-1 Page: Page 4 of 4 Job #: _____</p>															
<p>Company: Alabama Power General Test Laboratory Address: 7444 County Rd 87 GSC #8 City: Calera State, Zip: AL, 35040 Phone: 205-664-6121 (Tel) Email: sgcopela@southemco.com Project Name: 40007143 CCR Site: Gorgas Landfill (1)</p>			<p>Due Date Requested: TAT Requested (days): Routine PO #: _____ WFO #: _____ Project #: 40007143 SSO#: _____</p>		<p>Carrier Tracking No(s): _____</p>															
<p>Sample Identification</p>			<p>Sample Date</p>		<p>Sample Time</p>		<p>Sample Type (C=Comp, G=grab)</p>		<p>Matrix (W=Water, S=Solid, O=Other)</p>		<p>Hold/Filtered Sample (Yes or No)</p>		<p>Form/MS/MSD (Yes or No)</p>		<p>Analysis Requested</p>		<p>Special Instructions/Note:</p>			
			4/27/16		1540		G		Water		X		9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc							
			4/27/16		1616		G		Water		Y									
			4/28/16		1515		G		Water		X									
<p>Possible Hazard Identification <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</p>															<p>Deliverable Requested: I, II, III, IV, Other (specify)</p>					
<p>Empty Kit Relinquished by: Sarah Copeland Date: 6/27/16 11:00 Company: APC</p>															<p>Method of Shipment: _____ Date/Time: _____ Company: _____</p>					
<p>Relinquished by: Sarah Copeland Date/Time: 6/28/16 1544 Company: APC</p>															<p>Received by: _____ Date/Time: _____ Company: _____</p>					
<p>Relinquished by: _____ Date/Time: _____ Company: _____</p>															<p>Received by: _____ Date/Time: 6/28/16 15:44 Company: _____</p>					
<p>Custody Seals Intact: _____ Δ Yes Δ No</p>															<p>Cooler Temperature(s) °C and Other Remarks: _____</p>					



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-123620-1
SDG Number: Gorgas Landfill (1)

Login Number: 123620

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	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.	False	AW10940 was received but not listed on the coc.
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: 400-123620-1
 SDG: Gorgas Landfill (1)

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	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	06-30-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-17

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	06-30-17 *
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-17 *
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17 *
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17 *
New Jersey	NELAP	2	MO002	06-30-17 *
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: 400-123620-1
 SDG: Gorgas Landfill (1)

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	06-30-17 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-17 *
Texas	NELAP	6	T104704193-16-10	07-31-17 *
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17 *
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

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



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_29

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_29

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>Chloride Batch ID</u>	<u>Fluoride Batch ID</u>	<u>Sulfate Batch ID</u>	<u>Project ID</u>
AW15618	568122	568123	568124	WMWGORLF_29
AW15619	568122	568123	568124	WMWGORLF_29
AW15620	568122	568123	568124	WMWGORLF_29
AW15621	568122	568123	568124	WMWGORLF_29
AW15622	568122	568123	568124	WMWGORLF_29
AW15623	568122	568123	568124	WMWGORLF_29
AW15624	568122	568123	568124	WMWGORLF_29
AW15625	568122	568123	568124	WMWGORLF_29
AW15626	568196	568197	568198	WMWGORLF_29
AW15627	568196	568197	568198	WMWGORLF_29
AW15628	568196	568197	568198	WMWGORLF_29
AW15629	568196	568197	568198	WMWGORLF_29
AW15630	568196	568197	568198	WMWGORLF_29
AW15631	568196	568197	568198	WMWGORLF_29
AW15632	568196	568197	568198	WMWGORLF_29
AW15672	568196	568197	568198	WMWGORLF_29
AW15673	568196	568197	568198	WMWGORLF_29
AW15674	568517	568518	568519	WMWGORLF_29
AW15718	568517	568518	568519	WMWGORLF_29
AW15719	568517	568518	568519	WMWGORLF_29
AW15720	568517	568518	568519	WMWGORLF_29
AW15721	568517	568518	568519	WMWGORLF_29
AW15722	568517	568518	568519	WMWGORLF_29
AW15723	568517	568518	568519	WMWGORLF_29
AW15724	568514	568515	568516	WMWGORLF_29

4. All of the above samples were analyzed and prepared by EPA 300.0.
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 instrument performance check (IPC) was analyzed and all criteria were met.
- All laboratory reagent blanks were less than the method detection limits for the requested anions, with the following exceptions:
 1. The blank for anion sulfate in batch 568124 presented a concentration above the MDL of 0.3, at 0.369 mg/L. The sulfate result for sample AW15625 was above the MDL but below the RL value of 1.0 mg/L; this result should be considered as a quantitatively estimated result, with indication of potential positive bias.
 2. The blank for anion sulfate in batch 568198 presented a concentration above the MDL of 0.3, at 0.453mg/L. The sulfate result for sample AW15632 was above the MDL but below the RL value of 1.0 mg/L; this result should be considered as a quantitatively estimated result with indication of potential positive bias.
 3. The blank for anion fluoride in batch 568518 presented a concentration above the MDL of 0.01 mg/L, at 0.042 mg/L. Positive batch samples for fluoride greater than MDL but below the RL of 0.3 mg/L (AW15674, and AW15720 - AW15723, inclusive) are less than 10x the blank value and are considered as quantitatively estimated results with indication of potential high bias. Sample AW15718 was above the fluoride RL value but less than 10x the blank value and is also considered as quantitatively estimated with indication of potential high bias.
 4. The blank for anion sulfate in batch 568519 presented a concentration above the MDL of 0.3 mg/L, at 0.471 mg/L. Sulfate in sample AW15719 was reported above the MDL but below the RL value, and is less than 10x the associated blank concentration, and should be considered as a quantitatively estimated result with indication of potential high bias.
 5. The blank for anion sulfate in batch 568516 presented a concentration above the MDL of 0.3, at 0.465 mg/L. The associated batch sample, AW15724, was greater than 10x the blank concentration, and no qualification was necessary.
- All laboratory fortified blanks were within acceptance criteria for the anions requested, with the following exceptions:
 1. No closing LFB was listed for the dilution re-analyses for sulfate in batch 568124. Due to absence of LFB data, the reported results for the following sample dilutions for sulfate are qualified as quantitatively estimated with indeterminate bias direction and magnitude: AW15618, AW15619, AW15620, AW15621, AW15622, AW15623 and AW15624.
 2. No closing LFB was listed for the dilution re-analyses for sulfate in batch 568198. Due to absence of LFB data, the reported results for the following sample dilutions for sulfate are qualified as quantitatively estimated with indeterminate bias direction and magnitude: AW15626, AW15627, AW15628, AW15629, AW15630, AW15631, AW15672 and AW15673.



3. No closing LFB was listed for the dilution re-analyses for sulfate in batch 568519. Due to absence of LFB data, the reported results for the following sample dilutions for sulfate are qualified as quantitatively estimated with indeterminate bias direction and magnitude: AW15674, AW15718, AW15720, AW15721, AW15722 and AW15723.
 4. No closing LFB was listed for the dilution re-analyses for sulfate in batch 568516. Due to absence of LFB data, the reported result for the following sample dilution for sulfate is qualified as quantitatively estimated with indeterminate bias direction and magnitude: AW15724.
- 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 laboratory fortified matrix (LFM) sample was analyzed with each batch. All acceptance criteria for accuracy were met. It is noted that the LFM for sulfate in batches 568519 and 568516 was diluted prior to spiking, and the diluted LFM sample was spiked at 50x normal concentration, with acceptable recovery.
 - A sample duplicate and/or laboratory fortified matrix duplicate were analyzed with each batch. All acceptance criteria for precision were met. It is noted that separate and distinct criteria for duplicate precision calculations, based on sample and duplicate anion concentrations, are used to assess precision compliance. These are as follow: if the sample and duplicate are both greater than 5x anion Reporting Limit (RL) concentration, the precision is calculated and reported as relative percent difference (RPD), with an acceptance range of 0 - 20%; if either the sample or duplicate are less than 5x anion RL, the precision is calculated and reported as the absolute value of the difference between the two concentrations, with an acceptance range of less than or equal to the anion RL value.
7. Samples AW15618, AW15619, AW15620, AW15621, AW15622, AW15623, AW15624, AW15626, AW15627, AW15628, AW15629, AW15630, AW15631, AW15672, AW15673, AW15674, AW15718, AW15720, AW15721, AW15722, AW15723 and AW15724 were re-analyzed for sulfate at a 50x dilution, due to undiluted results exceeding the calibrated range of the detector. The dilution results for sulfate for these samples should be used; reporting limit (RL) values are adjusted upward to reflect the dilution factor applied.



<u>Sample ID</u>		<u>Analyte</u>		<u>Dilution Factor</u>
AW15618		Sulfate		50X
AW15619		Sulfate		50X
AW15620		Sulfate		50X
AW15621		Sulfate		50X
AW15622		Sulfate		50X
AW15623		Sulfate		50X
AW15624		Sulfate		50X
AW15626		Sulfate		50X
AW15627		Sulfate		50X
AW15628		Sulfate		50X
AW15629		Sulfate		50X
AW15630		Sulfate		50X
AW15631		Sulfate		50X
AW15672		Sulfate		50X
AW15673		Sulfate		50X
AW15674		Sulfate		50X
AW15718		Sulfate		50X
AW15720		Sulfate		50X
AW15721		Sulfate		50X
AW15722		Sulfate		50X
AW15723		Sulfate		50X
AW15724		Sulfate		50X

8. The raw data results are shown with dilution factors included, when dilutions are manually performed by the analyst.
 The raw data results are shown without dilution factor corrections, when dilutions are run automatically by the instrument.



Metals ICP

Gorgas Landfill

WMWGORLF_29

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>
AW15618	20160628D_20160629	WMWGORLF_29
AW15619	20160628D_20160629	WMWGORLF_29
AW15620	20160628D_20160629	WMWGORLF_29
AW15621	20160628D_20160629	WMWGORLF_29
AW15622	20160628D_20160629	WMWGORLF_29
AW15623	20160628D_20160629	WMWGORLF_29
AW15624	20160707A_20160708	WMWGORLF_29
AW15625	20160707A_20160708	WMWGORLF_29
AW15626	20160707A_20160708	WMWGORLF_29
AW15627	20160707A_20160708	WMWGORLF_29
AW15628	20160707A_20160708	WMWGORLF_29
AW15629	20160707A_20160708	WMWGORLF_29
AW15630	20160707A_20160708	WMWGORLF_29
AW15631	20160707A_20160708	WMWGORLF_29
AW15632	20160707A_20160708	WMWGORLF_29
AW15672	20160707A_20160708	WMWGORLF_29
AW15673	20160707B_20160708A	WMWGORLF_29
AW15674	20160707B_20160708A	WMWGORLF_29
AW15718	20160707B_20160708A	WMWGORLF_29
AW15719	20160707B_20160708A	WMWGORLF_29
AW15720	20160707B_20160708A	WMWGORLF_29
AW15721	20160707B_20160708A	WMWGORLF_29
AW15722	20160707B_20160708A	WMWGORLF_29
AW15723	20160707B_20160708A	WMWGORLF_29
AW15724	20160624D	WMWGORLF_29

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



General Quality Control Procedures:

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

Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested (if applicable) and analyzed with each ICP batch. All acceptance criteria for accuracy were met with the following exceptions:

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AW15623
Calcium	AW15672
Calcium	AW15723
Calcium	AW15724

The concentrations of these analytes in the matrix spike were less than 30 percent of the analyte sample concentration causing inaccurate spike recovery information. The laboratory control sample indicates that the digestion (if applicable) and analysis were in control.

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



7. All samples were analyzed without a dilution with the following exceptions: The following samples were diluted due to sample concentrations from the undiluted analysis were over the high standard of the calibration curve.

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution factor</u>
AW15618	Calcium	10.15
AW15619	Calcium	10.15
AW15620	Calcium	10.15
AW15621	Calcium	10.15
AW15622	Calcium	10.15
AW15623	Calcium	10.15
AW15623MS	Calcium	10.15
AW15623MS	Calcium	10.15
AW15627	Calcium	10.15X
AW15628	Calcium	10.15X
AW15629	Calcium	10.15X
AW15630	Calcium	10.15X
AW15631	Calcium	10.15X
AW15672	Calcium	10.15X
AW15672MS	Calcium	10.15X
AW15672MS	Calcium	10.15X
AW15624	Calcium	25.375X
AW15626	Calcium	25.375X
AW15673	Calcium	10.15X
AW15674	Calcium	10.15X
AW15718	Calcium	10.15X
AW15720	Calcium	10.15X
AW15721	Calcium	10.15X
AW15722	Calcium	10.15X
AW15723	Calcium	10.15X
AW15723MS	Calcium	10.15X
AW15723MSD	Calcium	10.15X
AW15724	Calcium	10.15x
AW15724MS	Calcium	10.15x
AW15724MSD	Calcium	10.15x

8. The raw data results include both results corrected for dilution and results not corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_29

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>
AW15618	568265	WMWGORLF_29
AW15619	568265	WMWGORLF_29
AW15620	568265	WMWGORLF_29
AW15621	568265	WMWGORLF_29
AW15622	568265	WMWGORLF_29
AW15623	568265	WMWGORLF_29
AW15624	568265	WMWGORLF_29
AW15625	568265	WMWGORLF_29
AW15626	568265	WMWGORLF_29
AW15627	568265	WMWGORLF_29
AW15628	268277	WMWGORLF_29
AW15629	268277	WMWGORLF_29
AW15630	268277	WMWGORLF_29
AW15631	268277	WMWGORLF_29
AW15632	268277	WMWGORLF_29
AW15672	268277	WMWGORLF_29
AW15673	268277	WMWGORLF_29
AW15674	268277	WMWGORLF_29
AW15718	568922	WMWGORLF_29
AW15719	568922	WMWGORLF_29
AW15720	568922	WMWGORLF_29
AW15721	568922	WMWGORLF_29
AW15722	568922	WMWGORLF_29
AW15723	568922	WMWGORLF_29
AW15724	568792	WMWGORLF_29

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.
7. Cadmium MDL increased from 0.0001mg/L to 0.0002mg/L. Sample AW15629 is now reported as Not Detected.



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, with the exception of batch 568792, which is a dissolved sample and does not get digested.
- 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.
8. All samples were analyzed at a dilution of 1 to 5 to compensate for any matrix effects.
 9. The raw data results are shown with dilution factors included.



Mercury

Gorgas Landfill

WMWGORLF_29

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.

Sample ID	Batch ID	Project ID
AW15618	568234	WMWGORLF_29
AW15619	568234	WMWGORLF_29
AW15620	568234	WMWGORLF_29
AW15621	568234	WMWGORLF_29
AW15622	568234	WMWGORLF_29
AW15623	568234	WMWGORLF_29
AW15624	568234	WMWGORLF_29
AW15625	568234	WMWGORLF_29
AW15626	568234	WMWGORLF_29
AW15724	569185	WMWGORLF_29
AW15719	569188	WMWGORLF_29
AW15720	569188	WMWGORLF_29
AW15721	569188	WMWGORLF_29
AW15722	569188	WMWGORLF_29
AW15723	569188	WMWGORLF_29
AW15627	569187	WMWGORLF_29
AW15628	569187	WMWGORLF_29
AW15629	569187	WMWGORLF_29
AW15630	569187	WMWGORLF_29
AW15631	569187	WMWGORLF_29
AW15632	569187	WMWGORLF_29
AW15672	569187	WMWGORLF_29
AW15673	569187	WMWGORLF_29
AW15674	569187	WMWGORLF_29
AW15718	569187	WMWGORLF_29

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_29

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>
AW15618	568252	WMWGORLF_29
AW15619	568252	WMWGORLF_29
AW15620	568252	WMWGORLF_29
AW15621	568252	WMWGORLF_29
AW15622	568252	WMWGORLF_29
AW15623	568252	WMWGORLF_29
AW15624	568252	WMWGORLF_29
AW15625	568252	WMWGORLF_29
AW15626	568252	WMWGORLF_29
AW15627	568252	WMWGORLF_29
AW15628	568253	WMWGORLF_29
AW15629	568253	WMWGORLF_29
AW15630	568253	WMWGORLF_29
AW15631	568253	WMWGORLF_29
AW15632	568253	WMWGORLF_29
AW15672	568319	WMWGORLF_29
AW15673	568319	WMWGORLF_29
AW15674	568319	WMWGORLF_29
AW15718	568319	WMWGORLF_29
AW15719	568319	WMWGORLF_29
AW15720	568319	WMWGORLF_29
AW15721	568319	WMWGORLF_29
AW15722	568319	WMWGORLF_29
AW15723	568320	WMWGORLF_29

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.
7. TDS reporting limit was incorrectly listed as 2.5mg/L. It was corrected to reflect filter volume and project limits. Sample AW15632 is now reported as Not Detected.



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 0.5 mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5%, with the exception of batch 568319, which was 5.03%.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- All samples were between 2.5 mg and 200 mg residue with the exception of AW15625, AW15632 and AW15719 which were <2.5mg.

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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW15618

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00951	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/28/2016	EPA 200.7		1.015	0.02	0.1	J 0.0227	mg/L
* Calcium, Total	HRG	6/29/2016	EPA 200.7		10.15	1.0	5.0	152	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	0.00210	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0413	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	6/24/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/28/2016	EPA 200.7		1.015	0.01	0.05	J 0.0246	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00242	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		125	2060	mg/L
* Chloride, Total	SES	6/22/2016	EPA 300.0		1	0.04	0.25	2.09	mg/L
* Fluoride, Total	SES	6/22/2016	EPA 300.0		1	0.01	0.3	J 0.148	mg/L
* Sulfate, Total	SES	6/23/2016	EPA 300.0		50	15.0	50	1420	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, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW15618

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15626 Mercury, Total by CVAA	mg/L	0.00009	0.0005	0.004	0.00398	0.00393	0.00392	0.0034 to 0.0046	99.5	70 to 130	1.26	20	
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	
AW15623 Boron, Total	mg/L	0.00244	0.044	1.00	1.18	1.11	1.05	0.85 to 1.15	110	70 to 130	6.11	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	
AW15623 Calcium, Total	mg/L	0.00206	0.22	5.00	333	343	4.69	4.25 to 5.75	120	70 to 130	2.96	20	
AW15623 Lithium, Total	mg/L	0.000377	0.022	0.20	0.409	0.416	0.195	0.17 to 0.23	119	70 to 130	1.70	20	
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW15618

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15627	Solids, Dissolved	mg/L	-7.0	25				2240	42	40 to 60			0.621	5
AW15384	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05		0.119	1.95	1.8 to 2.2	96.6	80 to 120	0.844	20
AW15384	Chloride, Total	mg/L	0.000	0.25	10.00	16.3		6.52	9.77	9 to 11	97.8	80 to 120	0.00	20
AW15384	Sulfate, Total	mg/L	0.369	1.0	20.00	31.8		12.4	19.3	18 to 22	97.0	80 to 120	0.00	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW15619

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0165	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/28/2016	EPA 200.7		1.015	0.02	0.1	J 0.0284	mg/L
* Calcium, Total	HRG	6/29/2016	EPA 200.7		10.15	1.0	5.0	168	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0767	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	6/24/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/28/2016	EPA 200.7		1.015	0.01	0.05	0.0583	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		100	1620	mg/L
* Chloride, Total	SES	6/22/2016	EPA 300.0		1	0.04	0.25	3.43	mg/L
* Fluoride, Total	SES	6/22/2016	EPA 300.0		1	0.01	0.3	J 0.148	mg/L
* Sulfate, Total	SES	6/23/2016	EPA 300.0		50	15.0	50	964	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, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW15619

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15626 Mercury, Total by CVAA	mg/L	0.00009	0.0005	0.004	0.00398	0.00393	0.00392	0.0034 to 0.0046	99.5	70 to 130	1.26	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	
AW15623 Calcium, Total	mg/L	0.00206	0.22	5.00	333	343	4.69	4.25 to 5.75	120	70 to 130	2.96	20	
AW15623 Lithium, Total	mg/L	0.000377	0.022	0.20	0.409	0.416	0.195	0.17 to 0.23	119	70 to 130	1.70	20	
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15623 Boron, Total	mg/L	0.00244	0.044	1.00	1.18	1.11	1.05	0.85 to 1.15	110	70 to 130	6.11	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW15619

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15384	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.119	1.95	1.8 to 2.2	96.6	80 to 120	0.844	20
AW15627	Solids, Dissolved	mg/L	-7.0	25			2240	42	40 to 60			0.621	5
AW15384	Chloride, Total	mg/L	0.000	0.25	10.00	16.3	6.52	9.77	9 to 11	97.8	80 to 120	0.00	20
AW15384	Sulfate, Total	mg/L	0.369	1.0	20.00	31.8	12.4	19.3	18 to 22	97.0	80 to 120	0.00	20

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CC:

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

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-2 Dup

Laboratory ID Number: AW15620

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0166	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/28/2016	EPA 200.7		1.015	0.02	0.1	J 0.0286	mg/L
* Calcium, Total	HRG	6/29/2016	EPA 200.7		10.15	1.0	5.0	166	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0777	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	6/24/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/28/2016	EPA 200.7		1.015	0.01	0.05	0.0589	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		100	1600	mg/L
* Chloride, Total	SES	6/22/2016	EPA 300.0		1	0.04	0.25	3.40	mg/L
* Fluoride, Total	SES	6/22/2016	EPA 300.0		1	0.01	0.3	J 0.146	mg/L
* Sulfate, Total	SES	6/23/2016	EPA 300.0		50	15.0	50	970	mg/L

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17



Corrected Copy

To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-2 Dup

Laboratory ID Number: AW15620

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15626 Mercury, Total by CVAA	mg/L	0.00009	0.0005	0.004	0.00398	0.00393	0.00392	0.0034 to 0.0046	99.5	70 to 130	1.26	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15623 Calcium, Total	mg/L	0.00206	0.22	5.00	333	343	4.69	4.25 to 5.75	120	70 to 130	2.96	20	
AW15623 Lithium, Total	mg/L	0.000377	0.022	0.20	0.409	0.416	0.195	0.17 to 0.23	119	70 to 130	1.70	20	
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	
AW15623 Boron, Total	mg/L	0.00244	0.044	1.00	1.18	1.11	1.05	0.85 to 1.15	110	70 to 130	6.11	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-2 Dup

Laboratory ID Number: AW15620

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15384	Fluoride, Total	mg/L	0.000	0.3		2.00	2.05	0.119	1.95	1.8 to 2.2	96.6	80 to 120	0.844	20
AW15627	Solids, Dissolved	mg/L	-7.0	25				2240	42	40 to 60			0.621	5
AW15384	Chloride, Total	mg/L	0.000	0.25		10.00	16.3	6.52	9.77	9 to 11	97.8	80 to 120	0.00	20
AW15384	Sulfate, Total	mg/L	0.369	1.0		20.00	31.8	12.4	19.3	18 to 22	97.0	80 to 120	0.00	20

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CC:

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 Calera, AL 35040
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 FAX (205) 257-1654

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW15621

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0103	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/28/2016	EPA 200.7		1.015	0.02	0.1	J 0.0434	mg/L
* Calcium, Total	HRG	6/29/2016	EPA 200.7		10.15	1.0	5.0	295	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	6/24/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/28/2016	EPA 200.7		1.015	0.01	0.05	0.0554	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		250	3870	mg/L
* Chloride, Total	SES	6/22/2016	EPA 300.0		1	0.04	0.25	1.85	mg/L
* Fluoride, Total	SES	6/22/2016	EPA 300.0		1	0.01	0.3	0.361	mg/L
* Sulfate, Total	SES	6/23/2016	EPA 300.0		50	15.0	50	2500	mg/L

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW15621

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15626 Mercury, Total by CVAA	mg/L	0.00009	0.0005	0.004	0.00398	0.00393	0.00392	0.0034 to 0.0046	99.5	70 to 130	1.26	20	
AW15623 Calcium, Total	mg/L	0.00206	0.22	5.00	333	343	4.69	4.25 to 5.75	120	70 to 130	2.96	20	
AW15623 Lithium, Total	mg/L	0.000377	0.022	0.20	0.409	0.416	0.195	0.17 to 0.23	119	70 to 130	1.70	20	
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	
AW15623 Boron, Total	mg/L	0.00244	0.044	1.00	1.18	1.11	1.05	0.85 to 1.15	110	70 to 130	6.11	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	

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Expiration: June 30, 2017

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW15621

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit	Limit			Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15384	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.119	1.95	1.8 to 2.2	96.6	80 to 120	0.844	20
AW15627	Solids, Dissolved	mg/L	-7.0	25			2240	42	40 to 60			0.621	5
AW15384	Chloride, Total	mg/L	0.000	0.25	10.00	16.3	6.52	9.77	9 to 11	97.8	80 to 120	0.00	20
AW15384	Sulfate, Total	mg/L	0.369	1.0	20.00	31.8	12.4	19.3	18 to 22	97.0	80 to 120	0.00	20

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CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AW15622

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	J 0.00101	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0116	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/28/2016	EPA 200.7		1.015	0.02	0.1	J 0.0681	mg/L
* Calcium, Total	HRG	6/29/2016	EPA 200.7		10.15	1.0	5.0	291	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00484	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	6/24/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/28/2016	EPA 200.7		1.015	0.01	0.05	0.181	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		100	2360	mg/L
* Chloride, Total	SES	6/22/2016	EPA 300.0		1	0.04	0.25	2.29	mg/L
* Fluoride, Total	SES	6/22/2016	EPA 300.0		1	0.01	0.3	J 0.211	mg/L
* Sulfate, Total	SES	6/23/2016	EPA 300.0		50	15.0	50	1470	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AW15622

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15626 Mercury, Total by CVAA	mg/L	0.00009	0.0005	0.004	0.00398	0.00393	0.00392	0.0034 to 0.0046	99.5	70 to 130	1.26	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15623 Calcium, Total	mg/L	0.00206	0.22	5.00	333	343	4.69	4.25 to 5.75	120	70 to 130	2.96	20	
AW15623 Lithium, Total	mg/L	0.000377	0.022	0.20	0.409	0.416	0.195	0.17 to 0.23	119	70 to 130	1.70	20	
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	
AW15623 Boron, Total	mg/L	0.00244	0.044	1.00	1.18	1.11	1.05	0.85 to 1.15	110	70 to 130	6.11	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AW15622

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15627	Solids, Dissolved	mg/L	-7.0	25				2240	42	40 to 60			0.621	5
AW15384	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05		0.119	1.95	1.8 to 2.2	96.6	80 to 120	0.844	20
AW15384	Chloride, Total	mg/L	0.000	0.25	10.00	16.3		6.52	9.77	9 to 11	97.8	80 to 120	0.00	20
AW15384	Sulfate, Total	mg/L	0.369	1.0	20.00	31.8		12.4	19.3	18 to 22	97.0	80 to 120	0.00	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AW15623

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	J 0.00165	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0129	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/28/2016	EPA 200.7		1.015	0.02	0.1	J 0.0768	mg/L
* Calcium, Total	HRG	6/29/2016	EPA 200.7		10.15	1.0	5.0	327	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	6/24/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/28/2016	EPA 200.7		1.015	0.01	0.05	0.171	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		100	2460	mg/L
* Chloride, Total	SES	6/22/2016	EPA 300.0		1	0.04	0.25	2.04	mg/L
* Fluoride, Total	SES	6/22/2016	EPA 300.0		1	0.01	0.3	J 0.163	mg/L
* Sulfate, Total	SES	6/23/2016	EPA 300.0		50	15.0	50	1410	mg/L

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Recovery for Calcium is out of range.
 The spike amount is less than 30% of the sample amount. SGC 11/7/16

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AW15623

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15626 Mercury, Total by CVAA	mg/L	0.00009	0.0005	0.004	0.00398	0.00393	0.00392	0.0034 to 0.0046	99.5	70 to 130	1.26	20	
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	
AW15623 Calcium, Total	mg/L	0.00206	0.22	5.00	333	343	4.69	4.25 to 5.75	120	70 to 130	2.96	20	
AW15623 Lithium, Total	mg/L	0.000377	0.022	0.20	0.409	0.416	0.195	0.17 to 0.23	119	70 to 130	1.70	20	
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	
AW15623 Boron, Total	mg/L	0.00244	0.044	1.00	1.18	1.11	1.05	0.85 to 1.15	110	70 to 130	6.11	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Recovery for Calcium is out of range.
 The spike amount is less than 30% of the sample amount. SGC 11/7/16

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AW15623

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15384	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.119	1.95	1.8 to 2.2	96.6	80 to 120	0.844	20
AW15627	Solids, Dissolved	mg/L	-7.0	25			2240	42	40 to 60			0.621	5
AW15384	Chloride, Total	mg/L	0.000	0.25	10.00	16.3	6.52	9.77	9 to 11	97.8	80 to 120	0.00	20
AW15384	Sulfate, Total	mg/L	0.369	1.0	20.00	31.8	12.4	19.3	18 to 22	97.0	80 to 120	0.00	20

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 Recovery for Calcium is out of range.
 The spike amount is less than 30% of the sample amount. SGC 11/7/16

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AW15624

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	J 0.00473	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0133	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0729	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		25.375	2.5	12.5	318	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0269	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	6/24/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.253	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		250	3250	mg/L
* Chloride, Total	SES	6/22/2016	EPA 300.0		1	0.04	0.25	2.56	mg/L
* Fluoride, Total	SES	6/22/2016	EPA 300.0		1	0.01	0.3	J 0.153	mg/L
* Sulfate, Total	SES	6/23/2016	EPA 300.0		50	15.0	50	2000	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AW15624

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	
AW15626 Mercury, Total by CVAA	mg/L	0.00009	0.0005	0.004	0.00398	0.00393	0.00392	0.0034 to 0.0046	99.5	70 to 130	1.26	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AW15624

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec			
			Limit	Limit			Duplicate	LFB	Limit	Limit	Prec	Limit	
AW15627	Solids, Dissolved	mg/L	-7.0	25			2240	42	40 to 60		0.621	5	
AW15384	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.119	1.95	1.8 to 2.2	96.6	80 to 120	0.844	20
AW15384	Chloride, Total	mg/L	0.000	0.25	10.00	16.3	6.52	9.77	9 to 11	97.8	80 to 120	0.00	20
AW15384	Sulfate, Total	mg/L	0.369	1.0	20.00	31.8	12.4	19.3	18 to 22	97.0	80 to 120	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, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW15625

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	6/24/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	6/22/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	6/22/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	6/23/2016	EPA 300.0		1	0.3	1	J 0.369	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW15625

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15626 Mercury, Total by CVAA	mg/L	0.00009	0.0005	0.004	0.00398	0.00393	0.00392	0.0034 to 0.0046	99.5	70 to 130	1.26	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW15625

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	LFB	Rec	Prec	Prec	Limit
			Limit	Limit			Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15384	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.119	1.95	1.8 to 2.2	96.6	80 to 120	0.844	20
AW15627	Solids, Dissolved	mg/L	-7.0	25			2240	42	40 to 60			0.621	5
AW15384	Chloride, Total	mg/L	0.000	0.25	10.00	16.3	6.52	9.77	9 to 11	97.8	80 to 120	0.00	20
AW15384	Sulfate, Total	mg/L	0.369	1.0	20.00	31.8	12.4	19.3	18 to 22	97.0	80 to 120	0.00	20

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Expiration: June 30, 2017

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CC:

Reported: 6/12/2017
 Version: 2.0

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AW15626

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0112	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0304	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		25.375	2.5	12.5	295	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00228	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	6/24/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.0972	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		250	3920	mg/L
* Chloride, Total	SES	6/23/2016	EPA 300.0		1	0.04	0.25	6.32	mg/L
* Fluoride, Total	SES	6/23/2016	EPA 300.0		1	0.01	0.3	0.337	mg/L
* Sulfate, Total	SES	6/24/2016	EPA 300.0		50	15.0	50	2500	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AW15626

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15626 Mercury, Total by CVAA	mg/L	0.00009	0.0005	0.004	0.00398	0.00393	0.00392	0.0034 to 0.0046	99.5	70 to 130	1.26	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AW15626

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW15632	Sulfate, Total	mg/L	0.453	1.0	20.00	20.1	0.529	19.9	18 to 22	97.8	80 to 120	0.941	20
AW15627	Solids, Dissolved	mg/L	-7.0	25			2240	42	40 to 60			0.621	5
AW15632	Chloride, Total	mg/L	0.000	0.25	10.00	9.99	0.000	9.79	9 to 11	99.9	80 to 120	0	20
AW15632	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.000	1.99	1.8 to 2.2	102	80 to 120	0	20

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CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AW15627

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	J 0.00422	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0135	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0469	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	301	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00930	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	J 0.0191	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		100	2270	mg/L
* Chloride, Total	SES	6/23/2016	EPA 300.0		1	0.04	0.25	3.08	mg/L
* Fluoride, Total	SES	6/23/2016	EPA 300.0		1	0.01	0.3	J 0.176	mg/L
* Sulfate, Total	SES	6/24/2016	EPA 300.0		50	15.0	50	1160	mg/L

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 FAX (205) 257-1654

Batch QC Summary



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AW15627

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15627 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.0989	0.103	0.0999	0.085 to 0.115	98.9	70 to 130	3.80	20	
AW15627 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0972	0.101	0.101	0.085 to 0.115	97.2	70 to 130	3.99	20	
AW15627 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.100	0.104	0.101	0.085 to 0.115	100	70 to 130	3.73	20	
AW15627 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.108	0.113	0.0963	0.085 to 0.115	98.7	70 to 130	4.07	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15627 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.109	0.114	0.0952	0.085 to 0.115	95.5	70 to 130	4.63	20	
AW15627 Cadmium, Total	mg/L	0.00000263	0.00044	0.10	0.0944	0.100	0.0985	0.085 to 0.115	94.4	70 to 130	6.00	20	
AW15627 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.101	0.104	0.0975	0.085 to 0.115	101	70 to 130	3.35	20	
AW15627 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.104	0.108	0.100	0.085 to 0.115	99.8	70 to 130	3.52	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15627 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0940	0.0983	0.0952	0.085 to 0.115	94.0	70 to 130	4.47	20	
AW15627 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.101	0.106	0.0980	0.085 to 0.115	101	70 to 130	4.61	20	
AW15627 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.105	0.110	0.101	0.085 to 0.115	105	70 to 130	4.44	20	
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046	97.5	70 to 130	2.10	20	

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AW15627

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec			
			Limit	Limit			Duplicate	LFB	Limit	Limit	Prec	Limit	
AW15632	Sulfate, Total	mg/L	0.453	1.0	20.00	20.1	0.529	19.9	18 to 22	97.8	80 to 120	0.941	20
AW15627	Solids, Dissolved	mg/L	-7.0	25			2240	42	40 to 60			0.621	5
AW15632	Chloride, Total	mg/L	0.000	0.25	10.00	9.99	0.000	9.79	9 to 11	99.9	80 to 120	0	20
AW15632	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.000	1.99	1.8 to 2.2	102	80 to 120	0	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

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

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AW15628

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00941	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0369	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	354	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.0647	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		250	3120	mg/L
* Chloride, Total	SES	6/23/2016	EPA 300.0		1	0.04	0.25	1.64	mg/L
* Fluoride, Total	SES	6/23/2016	EPA 300.0		1	0.01	0.3	0.303	mg/L
* Sulfate, Total	SES	6/24/2016	EPA 300.0		50	15.0	50	1950	mg/L

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AW15628

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15674 Cadmium, Total	mg/L	0.0000263	0.00044	0.10	0.0944	0.0956	0.0985	0.085 to 0.115	94.4	70 to 130	1.32	20	
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046	97.5	70 to 130	2.10	20	
AW15674 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.87	20	
AW15674 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0978	0.105	0.101	0.085 to 0.115	97.8	70 to 130	7.19	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	
AW15674 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.112	0.113	0.100	0.085 to 0.115	102	70 to 130	0.924	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15674 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0933	0.0944	0.0952	0.085 to 0.115	93.3	70 to 130	1.21	20	
AW15674 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.102	0.0983	0.0999	0.085 to 0.115	102	70 to 130	3.33	20	
AW15674 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.850	20	
AW15674 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.104	0.103	0.0975	0.085 to 0.115	104	70 to 130	1.56	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15674 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.133	0.136	0.0963	0.085 to 0.115	94.2	70 to 130	1.96	20	
AW15674 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.113	0.114	0.0952	0.085 to 0.115	97.5	70 to 130	1.07	20	
AW15674 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.106	0.103	0.0980	0.085 to 0.115	106	70 to 130	2.31	20	

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Laboratory certification ID: E571114

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AW15628

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW15632	Sulfate, Total	mg/L	0.453	1.0	20.00	20.1	0.529	19.9	18 to 22	97.8	80 to 120	0.941	20
AW15698	Solids, Dissolved	mg/L	-7.0	25			386	42	40 to 60			1.18	5
AW15632	Chloride, Total	mg/L	0.000	0.25	10.00	9.99	0.000	9.79	9 to 11	99.9	80 to 120	0	20
AW15632	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.000	1.99	1.8 to 2.2	102	80 to 120	0	20

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-9

Laboratory ID Number: AW15629

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0122	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0693	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	337	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00759	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.127	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00303	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00813	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		250	3930	mg/L
* Chloride, Total	SES	6/23/2016	EPA 300.0		1	0.04	0.25	1.49	mg/L
* Fluoride, Total	SES	6/23/2016	EPA 300.0		1	0.01	0.3	J 0.257	mg/L
* Sulfate, Total	SES	6/24/2016	EPA 300.0		50	15.0	50	2420	mg/L

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. The result for Cd has been correctly changed to Not Detected. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-9

Laboratory ID Number: AW15629

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15674 Cadmium, Total	mg/L	0.0000263	0.00044	0.10	0.0944	0.0956	0.0985	0.085 to 0.115	94.4	70 to 130	1.32	20	
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046	97.5	70 to 130	2.10	20	
AW15674 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0978	0.105	0.101	0.085 to 0.115	97.8	70 to 130	7.19	20	
AW15674 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.87	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	
AW15674 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.112	0.113	0.100	0.085 to 0.115	102	70 to 130	0.924	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15674 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.133	0.136	0.0963	0.085 to 0.115	94.2	70 to 130	1.96	20	
AW15674 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.113	0.114	0.0952	0.085 to 0.115	97.5	70 to 130	1.07	20	
AW15674 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.106	0.103	0.0980	0.085 to 0.115	106	70 to 130	2.31	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15674 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0933	0.0944	0.0952	0.085 to 0.115	93.3	70 to 130	1.21	20	
AW15674 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.102	0.0983	0.0999	0.085 to 0.115	102	70 to 130	3.33	20	
AW15674 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.850	20	
AW15674 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.104	0.103	0.0975	0.085 to 0.115	104	70 to 130	1.56	20	

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. The result for Cd has been correctly changed to Not Detected. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 20-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-9

Laboratory ID Number: AW15629

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec			
			Limit	Limit			Duplicate	LFB	Limit	Limit			
AW15698	Solids, Dissolved	mg/L	-7.0	25			386	42	40 to 60		1.18	5	
AW15632	Sulfate, Total	mg/L	0.453	1.0	20.00	20.1	0.529	19.9	18 to 22	97.8	80 to 120	0.941	20
AW15632	Chloride, Total	mg/L	0.000	0.25	10.00	9.99	0.000	9.79	9 to 11	99.9	80 to 120	0	20
AW15632	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.000	1.99	1.8 to 2.2	102	80 to 120	0	20

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. The result for Cd has been correctly changed to Not Detected. SGC 3/17/17

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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AW15630

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0151	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0581	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	354	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0261	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	J 0.0222	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		250	3580	mg/L
* Chloride, Total	SES	6/23/2016	EPA 300.0		1	0.04	0.25	2.10	mg/L
* Fluoride, Total	SES	6/23/2016	EPA 300.0		1	0.01	0.3	J 0.208	mg/L
* Sulfate, Total	SES	6/24/2016	EPA 300.0		50	15.0	50	2270	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, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AW15630

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15674 Cadmium, Total	mg/L	0.0000263	0.00044	0.10	0.0944	0.0956	0.0985	0.085 to 0.115	94.4	70 to 130	1.32	20	
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046	97.5	70 to 130	2.10	20	
AW15674 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.87	20	
AW15674 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0978	0.105	0.101	0.085 to 0.115	97.8	70 to 130	7.19	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	
AW15674 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.112	0.113	0.100	0.085 to 0.115	102	70 to 130	0.924	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15674 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.133	0.136	0.0963	0.085 to 0.115	94.2	70 to 130	1.96	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15674 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0933	0.0944	0.0952	0.085 to 0.115	93.3	70 to 130	1.21	20	
AW15674 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.102	0.0983	0.0999	0.085 to 0.115	102	70 to 130	3.33	20	
AW15674 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.850	20	
AW15674 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.104	0.103	0.0975	0.085 to 0.115	104	70 to 130	1.56	20	
AW15674 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.113	0.114	0.0952	0.085 to 0.115	97.5	70 to 130	1.07	20	
AW15674 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.106	0.103	0.0980	0.085 to 0.115	106	70 to 130	2.31	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AW15630

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW15632	Sulfate, Total	mg/L	0.453	1.0	20.00	20.1	0.529	19.9	18 to 22	97.8	80 to 120	0.941	20
AW15698	Solids, Dissolved	mg/L	-7.0	25			386	42	40 to 60			1.18	5
AW15632	Chloride, Total	mg/L	0.000	0.25	10.00	9.99	0.000	9.79	9 to 11	99.9	80 to 120	0	20
AW15632	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.000	1.99	1.8 to 2.2	102	80 to 120	0	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AW15631

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	J 0.00169	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0122	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0504	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	360	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0113	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	J 0.0374	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		250	3400	mg/L
* Chloride, Total	SES	6/23/2016	EPA 300.0		1	0.04	0.25	1.83	mg/L
* Fluoride, Total	SES	6/23/2016	EPA 300.0		1	0.01	0.3	J 0.265	mg/L
* Sulfate, Total	SES	6/24/2016	EPA 300.0		50	15.0	50	2080	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AW15631

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15674 Cadmium, Total	mg/L	0.0000263	0.00044	0.10	0.0944	0.0956	0.0985	0.085 to 0.115	94.4	70 to 130	1.32	20	
AW15674 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.87	20	
AW15674 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0978	0.105	0.101	0.085 to 0.115	97.8	70 to 130	7.19	20	
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046	97.5	70 to 130	2.10	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	
AW15674 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.112	0.113	0.100	0.085 to 0.115	102	70 to 130	0.924	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15674 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.133	0.136	0.0963	0.085 to 0.115	94.2	70 to 130	1.96	20	
AW15674 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.113	0.114	0.0952	0.085 to 0.115	97.5	70 to 130	1.07	20	
AW15674 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.106	0.103	0.0980	0.085 to 0.115	106	70 to 130	2.31	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15674 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0933	0.0944	0.0952	0.085 to 0.115	93.3	70 to 130	1.21	20	
AW15674 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.102	0.0983	0.0999	0.085 to 0.115	102	70 to 130	3.33	20	
AW15674 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.850	20	
AW15674 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.104	0.103	0.0975	0.085 to 0.115	104	70 to 130	1.56	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AW15631

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec			
			Limit	Limit			Duplicate	LFB	Limit	Limit			
AW15632	Sulfate, Total	mg/L	0.453	1.0	20.00	20.1	0.529	19.9	18 to 22	97.8	80 to 120	0.941	20
AW15698	Solids, Dissolved	mg/L	-7.0	25			386	42	40 to 60			1.18	5
AW15632	Chloride, Total	mg/L	0.000	0.25	10.00	9.99	0.000	9.79	9 to 11	99.9	80 to 120	0	20
AW15632	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.000	1.99	1.8 to 2.2	102	80 to 120	0	20

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

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

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW15632

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/24/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	6/23/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	6/23/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	6/23/2016	EPA 300.0		1	0.3	1	J 0.534	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. The result for TDS has been correctly changed to Not Detected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW15632

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15674 Cadmium, Total	mg/L	0.0000263	0.00044	0.10	0.0944	0.0956	0.0985	0.085 to 0.115	94.4	70 to 130	1.32	20	
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046	97.5	70 to 130	2.10	20	
AW15674 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.87	20	
AW15674 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0978	0.105	0.101	0.085 to 0.115	97.8	70 to 130	7.19	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15674 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0933	0.0944	0.0952	0.085 to 0.115	93.3	70 to 130	1.21	20	
AW15674 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.102	0.0983	0.0999	0.085 to 0.115	102	70 to 130	3.33	20	
AW15674 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.850	20	
AW15674 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.104	0.103	0.0975	0.085 to 0.115	104	70 to 130	1.56	20	
AW15674 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.113	0.114	0.0952	0.085 to 0.115	97.5	70 to 130	1.07	20	
AW15674 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.106	0.103	0.0980	0.085 to 0.115	106	70 to 130	2.31	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15674 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.133	0.136	0.0963	0.085 to 0.115	94.2	70 to 130	1.96	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	
AW15674 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.112	0.113	0.100	0.085 to 0.115	102	70 to 130	0.924	20	

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. The result for TDS has been correctly changed to Not Detected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 22-Jun-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW15632

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW15632	Sulfate, Total	mg/L	0.453	1.0	20.00	20.1	0.529	19.9	18 to 22	97.8	80 to 120	0.941	20
AW15698	Solids, Dissolved	mg/L	-7.0	25			386	42	40 to 60			1.18	5
AW15632	Chloride, Total	mg/L	0.000	0.25	10.00	9.99	0.000	9.79	9 to 11	99.9	80 to 120	0	20
AW15632	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.000	1.99	1.8 to 2.2	102	80 to 120	0	20

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Reported: 6/12/2017
 Version: 2.0

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 23-Jun-16

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AW15672

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0120	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0472	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	282	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0745	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.0666	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/27/2016	SM 2540C		1		125	2520	mg/L
* Chloride, Total	SES	6/23/2016	EPA 300.0		1	0.04	0.25	1.19	mg/L
* Fluoride, Total	SES	6/23/2016	EPA 300.0		1	0.01	0.3	0.347	mg/L
* Sulfate, Total	SES	6/24/2016	EPA 300.0		50	15.0	50	1720	mg/L

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Recovery for Calcium is out of range.
 The spike amount is less than 30% of the sample amount. SGC 11/7/16

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 23-Jun-16

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AW15672

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15674 Cadmium, Total	mg/L	0.0000263	0.00044	0.10	0.0944	0.0956	0.0985	0.085 to 0.115	94.4	70 to 130	1.32	20	
AW15674 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.87	20	
AW15674 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0978	0.105	0.101	0.085 to 0.115	97.8	70 to 130	7.19	20	
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046	97.5	70 to 130	2.10	20	
AW15674 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.113	0.114	0.0952	0.085 to 0.115	97.5	70 to 130	1.07	20	
AW15674 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.106	0.103	0.0980	0.085 to 0.115	106	70 to 130	2.31	20	
AW15672 Lithium, Total	mg/L	0.000286	0.022	0.20	0.292	0.303	0.174	0.17 to 0.23	113	70 to 130	3.70	20	
AW15674 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.112	0.113	0.100	0.085 to 0.115	102	70 to 130	0.924	20	
AW15672 Calcium, Total	mg/L	-0.0000121	0.22	5.00	285	282	4.32	4.25 to 5.75	60.0	70 to 130	1.06	20	
AW15674 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0933	0.0944	0.0952	0.085 to 0.115	93.3	70 to 130	1.21	20	
AW15674 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.102	0.0983	0.0999	0.085 to 0.115	102	70 to 130	3.33	20	
AW15674 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.850	20	
AW15674 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.104	0.103	0.0975	0.085 to 0.115	104	70 to 130	1.56	20	
AW15672 Boron, Total	mg/L	0.000533	0.044	1.00	1.09	1.05	1.01	0.85 to 1.15	104	70 to 130	3.74	20	
AW15674 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.133	0.136	0.0963	0.085 to 0.115	94.2	70 to 130	1.96	20	

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Recovery for Calcium is out of range.
 The spike amount is less than 30% of the sample amount. SGC 11/7/16

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 23-Jun-16

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AW15672

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	LFB	Limit	Rec	Prec	Prec	Limit
								Duplicate	LFB			Rec	Limit	Prec	Limit
AW15722	Solids, Dissolved	mg/L	8.0	25				2820	47	40 to 60				5.03	5
AW15632	Sulfate, Total	mg/L	0.453	1.0	20.00	20.1		0.529	19.9	18 to 22		97.8	80 to 120	0.941	20
AW15632	Chloride, Total	mg/L	0.000	0.25	10.00	9.99		0.000	9.79	9 to 11		99.9	80 to 120	0	20
AW15632	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05		0.000	1.99	1.8 to 2.2		102	80 to 120	0	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Recovery for Calcium is out of range.
 The spike amount is less than 30% of the sample amount. SGC 11/7/16

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 23-Jun-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW15673

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0101	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	J 0.00144	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0433	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	266	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	0.00163	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.332	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	J 0.00606	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.156	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/27/2016	SM 2540C		1		250	3250	mg/L
* Chloride, Total	SES	6/23/2016	EPA 300.0		1	0.04	0.25	1.46	mg/L
* Fluoride, Total	SES	6/23/2016	EPA 300.0		1	0.01	0.3	J 0.269	mg/L
* Sulfate, Total	SES	6/24/2016	EPA 300.0		50	15.0	50	2100	mg/L

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 23-Jun-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW15673

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15674 Cadmium, Total	mg/L	0.0000263	0.00044	0.10	0.0944	0.0956	0.0985	0.085 to 0.115	94.4	70 to 130	1.32	20	
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046	97.5	70 to 130	2.10	20	
AW15674 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0978	0.105	0.101	0.085 to 0.115	97.8	70 to 130	7.19	20	
AW15674 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.112	0.113	0.100	0.085 to 0.115	102	70 to 130	0.924	20	
AW15723 Calcium, Total	mg/L	0.00146	0.22	5.00	256	254	4.65	4.25 to 5.75	0.00	70 to 130	0.784	20	
AW15674 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.102	0.104	0.101	0.085 to 0.115	102	70 to 130	2.87	20	
AW15723 Boron, Total	mg/L	0.00222	0.044	1.00	1.31	1.26	0.980	0.85 to 1.15	106	70 to 130	3.89	20	
AW15674 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0933	0.0944	0.0952	0.085 to 0.115	93.3	70 to 130	1.21	20	
AW15674 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.102	0.0983	0.0999	0.085 to 0.115	102	70 to 130	3.33	20	
AW15674 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.850	20	
AW15674 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.104	0.103	0.0975	0.085 to 0.115	104	70 to 130	1.56	20	
AW15674 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.133	0.136	0.0963	0.085 to 0.115	94.2	70 to 130	1.96	20	
AW15723 Lithium, Total	mg/L	0.000245	0.022	0.20	0.515	0.513	0.191	0.17 to 0.23	115	70 to 130	0.389	20	
AW15674 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.113	0.114	0.0952	0.085 to 0.115	97.5	70 to 130	1.07	20	
AW15674 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.106	0.103	0.0980	0.085 to 0.115	106	70 to 130	2.31	20	

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Expiration: June 30, 2017

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 23-Jun-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW15673

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW15722	Solids, Dissolved	mg/L	8.0	25			2820	47	40 to 60			5.03	5
AW15632	Sulfate, Total	mg/L	0.453	1.0	20.00	20.1	0.529	19.9	18 to 22	97.8	80 to 120	0.941	20
AW15632	Chloride, Total	mg/L	0.000	0.25	10.00	9.99	0.000	9.79	9 to 11	99.9	80 to 120	0	20
AW15632	Fluoride, Total	mg/L	0.000	0.3	2.00	2.05	0.000	1.99	1.8 to 2.2	102	80 to 120	0	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 23-Jun-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW15674

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	0.00953	mg/L
* Barium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0155	mg/L
* Beryllium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	0.118	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	374	mg/L
* Cadmium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	0.0388	mg/L
* Chromium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.118	mg/L
* Molybdenum, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/27/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/27/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/27/2016	SM 2540C		1		250	2760	mg/L
* Chloride, Total	SES	6/28/2016	EPA 300.0		1	0.04	0.25	3.44	mg/L
* Fluoride, Total	SES	6/28/2016	EPA 300.0		1	0.01	0.3	J 0.146	mg/L
* Sulfate, Total	SES	6/28/2016	EPA 300.0		50	15.0	50	1960	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 23-Jun-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW15674

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15674 Cadmium, Total	mg/L	0.0000263	0.00044	0.10	0.0944	0.0956	0.0985	0.085 to 0.115		94.4	70 to 130	1.32	20
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046		97.5	70 to 130	2.10	20
AW15674 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0978	0.105	0.101	0.085 to 0.115		97.8	70 to 130	7.19	20
AW15674 Barium, Total	mg/L	0.0000172	0.0044	0.10	0.113	0.114	0.0952	0.085 to 0.115		97.5	70 to 130	1.07	20
AW15674 Lead, Total	mg/L	0.0000139	0.0022	0.10	0.106	0.103	0.0980	0.085 to 0.115		106	70 to 130	2.31	20
AW15674 Cobalt, Total	mg/L	0.00000184	0.0044	0.10	0.133	0.136	0.0963	0.085 to 0.115		94.2	70 to 130	1.96	20
AW15723 Lithium, Total	mg/L	0.000245	0.022	0.20	0.515	0.513	0.191	0.17 to 0.23		115	70 to 130	0.389	20
AW15674 Molybdenum, Total	mg/L	0.0000290	0.0044	0.10	0.102	0.104	0.101	0.085 to 0.115		102	70 to 130	2.87	20
AW15723 Boron, Total	mg/L	0.00222	0.044	1.00	1.31	1.26	0.980	0.85 to 1.15		106	70 to 130	3.89	20
AW15674 Antimony, Total	mg/L	0.000120	0.00132	0.10	0.0933	0.0944	0.0952	0.085 to 0.115		93.3	70 to 130	1.21	20
AW15674 Beryllium, Total	mg/L	0.0000179	0.00132	0.10	0.102	0.0983	0.0999	0.085 to 0.115		102	70 to 130	3.33	20
AW15674 Chromium, Total	mg/L	0.0000106	0.0044	0.10	0.101	0.102	0.101	0.085 to 0.115		101	70 to 130	0.850	20
AW15674 Thallium, Total	mg/L	0.0000121	0.00044	0.10	0.104	0.103	0.0975	0.085 to 0.115		104	70 to 130	1.56	20
AW15674 Arsenic, Total	mg/L	0.0000160	0.0022	0.10	0.112	0.113	0.100	0.085 to 0.115		102	70 to 130	0.924	20
AW15723 Calcium, Total	mg/L	0.00146	0.22	5.00	256	254	4.65	4.25 to 5.75		0.00	70 to 130	0.784	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 23-Jun-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW15674

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15723	Fluoride, Total	mg/L	0.000	0.3	2.00	2.15	0.157	1.95	1.8 to 2.2	99.8	80 to 120	1.28	20
AW15722	Solids, Dissolved	mg/L	8.0	25			2820	47	40 to 60			5.03	5
AW15723	Chloride, Total	mg/L	0.000	0.25	10.00	11.6	1.49	9.78	9 to 11	101	80 to 120	0.00	20
AW15723	Sulfate, Total	mg/L	0.450	1.0	1000	2100	999	19.5	18 to 22	109	80 to 120	1.10	20

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Expiration: June 30, 2017

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CC:

Reported: 6/12/2017
 Version: 2.0

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

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AW15718

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	J 0.00917	mg/L
* Beryllium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0390	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	365	mg/L
* Cadmium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	0.0844	mg/L
* Chromium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.0761	mg/L
* Molybdenum, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/27/2016	SM 2540C		1		250	3090	mg/L
* Chloride, Total	SES	6/28/2016	EPA 300.0		1	0.04	0.25	2.19	mg/L
* Fluoride, Total	SES	6/28/2016	EPA 300.0		1	0.01	0.3	0.334	mg/L
* Sulfate, Total	SES	6/28/2016	EPA 300.0		50	15.0	50	2230	mg/L

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AW15718

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15723 Molybdenum, Total	mg/L	0.0000391	0.0044	0.10	0.103	0.102	0.0982	0.085 to 0.115	103	70 to 130	0.844	20	
AW15723 Lead, Total	mg/L	0.00000509	0.0022	0.10	0.100	0.100	0.102	0.085 to 0.115	100	70 to 130	0.277	20	
AW15723 Lithium, Total	mg/L	0.000245	0.022	0.20	0.515	0.513	0.191	0.17 to 0.23	115	70 to 130	0.389	20	
AW15718 Mercury, Total by CVAA	mg/L	0.0000648	0.0005	0.004	0.00390	0.00398	0.00394	0.0034 to 0.0046	97.5	70 to 130	2.10	20	
AW15723 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.0825	0.0851	0.0880	0.085 to 0.115	82.5	70 to 130	3.03	20	
AW15723 Arsenic, Total	mg/L	0.0000190	0.0022	0.10	0.103	0.106	0.101	0.085 to 0.115	103	70 to 130	2.38	20	
AW15723 Cadmium, Total	mg/L	0.00000760	0.00044	0.10	0.0913	0.0924	0.0964	0.085 to 0.115	91.3	70 to 130	1.21	20	
AW15723 Calcium, Total	mg/L	0.00146	0.22	5.00	256	254	4.65	4.25 to 5.75	0.00	70 to 130	0.784	20	
AW15723 Beryllium, Total	mg/L	0.0000295	0.00132	0.10	0.119	0.113	0.111	0.085 to 0.115	119	70 to 130	5.29	20	
AW15723 Chromium, Total	mg/L	0.0000000206	0.0044	0.10	0.101	0.104	0.101	0.085 to 0.115	101	70 to 130	3.08	20	
AW15723 Cobalt, Total	mg/L	0.00000132	0.0044	0.10	0.106	0.107	0.0977	0.085 to 0.115	95.4	70 to 130	0.711	20	
AW15723 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0944	0.0978	0.100	0.085 to 0.115	94.4	70 to 130	3.57	20	
AW15723 Barium, Total	mg/L	0.0000206	0.0044	0.10	0.105	0.110	0.0934	0.085 to 0.115	86.9	70 to 130	4.56	20	
AW15723 Boron, Total	mg/L	0.00222	0.044	1.00	1.31	1.26	0.980	0.85 to 1.15	106	70 to 130	3.89	20	
AW15723 Thallium, Total	mg/L	0.00000626	0.00044	0.10	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.0424	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AW15718

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15722	Solids, Dissolved	mg/L	8.0	25				2820	47	40 to 60			5.03	5
AW15723	Fluoride, Total	mg/L	0.000	0.3	2.00	2.15		0.157	1.95	1.8 to 2.2	99.8	80 to 120	1.28	20
AW15723	Chloride, Total	mg/L	0.000	0.25	10.00	11.6		1.49	9.78	9 to 11	101	80 to 120	0.00	20
AW15723	Sulfate, Total	mg/L	0.450	1.0	1000	2100		999	19.5	18 to 22	109	80 to 120	1.10	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW15719

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/27/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	6/28/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	6/28/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	6/28/2016	EPA 300.0		1	0.3	1	J 0.506	mg/L

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW15719

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec Limit
			Limit	Spike				Limit	Rec	Limit	Prec	
AW15723 Lead, Total	mg/L	0.00000509	0.0022	0.10	0.100	0.100	0.102	0.085 to 0.115	100	70 to 130	0.277	20
AW15723 Molybdenum, Total	mg/L	0.0000391	0.0044	0.10	0.103	0.102	0.0982	0.085 to 0.115	103	70 to 130	0.844	20
AW15723 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.0825	0.0851	0.0880	0.085 to 0.115	82.5	70 to 130	3.03	20
AW15723 Barium, Total	mg/L	0.0000206	0.0044	0.10	0.105	0.110	0.0934	0.085 to 0.115	86.9	70 to 130	4.56	20
AW15723 Boron, Total	mg/L	0.00222	0.044	1.00	1.31	1.26	0.980	0.85 to 1.15	106	70 to 130	3.89	20
AW15723 Thallium, Total	mg/L	0.00000626	0.00044	0.10	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.0424	20
AW15723 Arsenic, Total	mg/L	0.0000190	0.0022	0.10	0.103	0.106	0.101	0.085 to 0.115	103	70 to 130	2.38	20
AW15723 Cadmium, Total	mg/L	0.00000760	0.00044	0.10	0.0913	0.0924	0.0964	0.085 to 0.115	91.3	70 to 130	1.21	20
AW15723 Calcium, Total	mg/L	0.00146	0.22	5.00	256	254	4.65	4.25 to 5.75	0.00	70 to 130	0.784	20
AW15723 Beryllium, Total	mg/L	0.0000295	0.00132	0.10	0.119	0.113	0.111	0.085 to 0.115	119	70 to 130	5.29	20
AW15723 Chromium, Total	mg/L	0.0000000206	0.0044	0.10	0.101	0.104	0.101	0.085 to 0.115	101	70 to 130	3.08	20
AW15723 Cobalt, Total	mg/L	0.00000132	0.0044	0.10	0.106	0.107	0.0977	0.085 to 0.115	95.4	70 to 130	0.711	20
AW15723 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0944	0.0978	0.100	0.085 to 0.115	94.4	70 to 130	3.57	20
AW15723 Lithium, Total	mg/L	0.000245	0.022	0.20	0.515	0.513	0.191	0.17 to 0.23	115	70 to 130	0.389	20
AW16823 Mercury, Total by CVAA	mg/L	0.0000956	0.0005	0.004	0.00355	0.00367	0.00408	0.0034 to 0.0046	88.8	70 to 130	3.31	20

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Expiration: June 30, 2017

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW15719

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15722	Solids, Dissolved	mg/L	8.0	25				2820	47	40 to 60			5.03	5
AW15723	Fluoride, Total	mg/L	0.000	0.3	2.00	2.15		0.157	1.95	1.8 to 2.2	99.8	80 to 120	1.28	20
AW15723	Chloride, Total	mg/L	0.000	0.25	10.00	11.6		1.49	9.78	9 to 11	101	80 to 120	0.00	20
AW15723	Sulfate, Total	mg/L	0.450	1.0	1000	2100		999	19.5	18 to 22	109	80 to 120	1.10	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AW15720

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	0.0148	mg/L
* Beryllium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	0.107	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	386	mg/L
* Cadmium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.271	mg/L
* Molybdenum, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/27/2016	SM 2540C		1		250	2500	mg/L
* Chloride, Total	SES	6/28/2016	EPA 300.0		1	0.04	0.25	2.68	mg/L
* Fluoride, Total	SES	6/28/2016	EPA 300.0		1	0.01	0.3	J 0.126	mg/L
* Sulfate, Total	SES	6/28/2016	EPA 300.0		50	15.0	50	1680	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, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AW15720

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15723 Lead, Total	mg/L	0.0000509	0.0022	0.10	0.100	0.100	0.102	0.085 to 0.115	100	70 to 130	0.277	20	
AW15723 Molybdenum, Total	mg/L	0.0000391	0.0044	0.10	0.103	0.102	0.0982	0.085 to 0.115	103	70 to 130	0.844	20	
AW15723 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.0825	0.0851	0.0880	0.085 to 0.115	82.5	70 to 130	3.03	20	
AW15723 Lithium, Total	mg/L	0.000245	0.022	0.20	0.515	0.513	0.191	0.17 to 0.23	115	70 to 130	0.389	20	
AW16823 Mercury, Total by CVAA	mg/L	0.0000956	0.0005	0.004	0.00355	0.00367	0.00408	0.0034 to 0.0046	88.8	70 to 130	3.31	20	
AW15723 Barium, Total	mg/L	0.0000206	0.0044	0.10	0.105	0.110	0.0934	0.085 to 0.115	86.9	70 to 130	4.56	20	
AW15723 Boron, Total	mg/L	0.00222	0.044	1.00	1.31	1.26	0.980	0.85 to 1.15	106	70 to 130	3.89	20	
AW15723 Thallium, Total	mg/L	0.0000626	0.00044	0.10	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.0424	20	
AW15723 Beryllium, Total	mg/L	0.0000295	0.00132	0.10	0.119	0.113	0.111	0.085 to 0.115	119	70 to 130	5.29	20	
AW15723 Chromium, Total	mg/L	0.000000206	0.0044	0.10	0.101	0.104	0.101	0.085 to 0.115	101	70 to 130	3.08	20	
AW15723 Cobalt, Total	mg/L	0.0000132	0.0044	0.10	0.106	0.107	0.0977	0.085 to 0.115	95.4	70 to 130	0.711	20	
AW15723 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0944	0.0978	0.100	0.085 to 0.115	94.4	70 to 130	3.57	20	
AW15723 Arsenic, Total	mg/L	0.0000190	0.0022	0.10	0.103	0.106	0.101	0.085 to 0.115	103	70 to 130	2.38	20	
AW15723 Cadmium, Total	mg/L	0.00000760	0.00044	0.10	0.0913	0.0924	0.0964	0.085 to 0.115	91.3	70 to 130	1.21	20	
AW15723 Calcium, Total	mg/L	0.00146	0.22	5.00	256	254	4.65	4.25 to 5.75	0.00	70 to 130	0.784	20	

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AW15720

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15722	Solids, Dissolved	mg/L	8.0	25				2820	47	40 to 60			5.03	5
AW15723	Fluoride, Total	mg/L	0.000	0.3	2.00	2.15		0.157	1.95	1.8 to 2.2	99.8	80 to 120	1.28	20
AW15723	Chloride, Total	mg/L	0.000	0.25	10.00	11.6		1.49	9.78	9 to 11	101	80 to 120	0.00	20
AW15723	Sulfate, Total	mg/L	0.450	1.0	1000	2100		999	19.5	18 to 22	109	80 to 120	1.10	20

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-20 Dup

Laboratory ID Number: AW15721

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	0.0155	mg/L
* Beryllium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	0.107	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	372	mg/L
* Cadmium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.269	mg/L
* Molybdenum, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/27/2016	SM 2540C		1		250	2790	mg/L
* Chloride, Total	SES	6/28/2016	EPA 300.0		1	0.04	0.25	2.67	mg/L
* Fluoride, Total	SES	6/28/2016	EPA 300.0		1	0.01	0.3	J 0.128	mg/L
* Sulfate, Total	SES	6/28/2016	EPA 300.0		50	15.0	50	1680	mg/L

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Laboratory certification ID: E571114

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-20 Dup

Laboratory ID Number: AW15721

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit	
			Limit	Spike				Limit	Rec	Limit	Prec			
AW15723 Lead, Total	mg/L	0.0000509	0.0022	0.10	0.100	0.100	0.102	0.085 to 0.115		100	70 to 130		0.277	20
AW15723 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.0825	0.0851	0.0880	0.085 to 0.115		82.5	70 to 130		3.03	20
AW15723 Molybdenum, Total	mg/L	0.0000391	0.0044	0.10	0.103	0.102	0.0982	0.085 to 0.115		103	70 to 130		0.844	20
AW15723 Arsenic, Total	mg/L	0.0000190	0.0022	0.10	0.103	0.106	0.101	0.085 to 0.115		103	70 to 130		2.38	20
AW15723 Cadmium, Total	mg/L	0.0000760	0.00044	0.10	0.0913	0.0924	0.0964	0.085 to 0.115		91.3	70 to 130		1.21	20
AW15723 Calcium, Total	mg/L	0.00146	0.22	5.00	256	254	4.65	4.25 to 5.75		0.00	70 to 130		0.784	20
AW15723 Beryllium, Total	mg/L	0.0000295	0.00132	0.10	0.119	0.113	0.111	0.085 to 0.115		119	70 to 130		5.29	20
AW15723 Chromium, Total	mg/L	0.000000206	0.0044	0.10	0.101	0.104	0.101	0.085 to 0.115		101	70 to 130		3.08	20
AW15723 Cobalt, Total	mg/L	0.00000132	0.0044	0.10	0.106	0.107	0.0977	0.085 to 0.115		95.4	70 to 130		0.711	20
AW15723 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0944	0.0978	0.100	0.085 to 0.115		94.4	70 to 130		3.57	20
AW15723 Barium, Total	mg/L	0.0000206	0.0044	0.10	0.105	0.110	0.0934	0.085 to 0.115		86.9	70 to 130		4.56	20
AW15723 Boron, Total	mg/L	0.00222	0.044	1.00	1.31	1.26	0.980	0.85 to 1.15		106	70 to 130		3.89	20
AW15723 Thallium, Total	mg/L	0.00000626	0.00044	0.10	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.0424	20
AW15723 Lithium, Total	mg/L	0.000245	0.022	0.20	0.515	0.513	0.191	0.17 to 0.23		115	70 to 130		0.389	20
AW16823 Mercury, Total by CVAA	mg/L	0.0000956	0.0005	0.004	0.00355	0.00367	0.00408	0.0034 to 0.0046		88.8	70 to 130		3.31	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-20 Dup

Laboratory ID Number: AW15721

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW15722	Solids, Dissolved	mg/L	8.0	25			2820	47	40 to 60			5.03	5
AW15723	Fluoride, Total	mg/L	0.000	0.3	2.00	2.15	0.157	1.95	1.8 to 2.2	99.8	80 to 120	1.28	20
AW15723	Chloride, Total	mg/L	0.000	0.25	10.00	11.6	1.49	9.78	9 to 11	101	80 to 120	0.00	20
AW15723	Sulfate, Total	mg/L	0.450	1.0	1000	2100	999	19.5	18 to 22	109	80 to 120	1.10	20

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW15722

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	J 0.00213	mg/L
* Barium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	0.0122	mg/L
* Beryllium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	J 0.0959	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	398	mg/L
* Cadmium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.232	mg/L
* Molybdenum, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/27/2016	SM 2540C		1		250	2550	mg/L
* Chloride, Total	SES	6/28/2016	EPA 300.0		1	0.04	0.25	2.16	mg/L
* Fluoride, Total	SES	6/28/2016	EPA 300.0		1	0.01	0.3	J 0.106	mg/L
* Sulfate, Total	SES	6/28/2016	EPA 300.0		50	15.0	50	1720	mg/L

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Precision for Total Dissolved Solids is out of range.
 Limit is 5; result is 5.03. Using significant figures of PQL, result would pass as 5.0, therefore will not be qualified. SGC 11/7/16

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW15722

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15723 Lead, Total	mg/L	0.0000509	0.0022	0.10	0.100	0.100	0.102	0.085 to 0.115	100	70 to 130	0.277	20	
AW15723 Molybdenum, Total	mg/L	0.0000391	0.0044	0.10	0.103	0.102	0.0982	0.085 to 0.115	103	70 to 130	0.844	20	
AW15723 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.0825	0.0851	0.0880	0.085 to 0.115	82.5	70 to 130	3.03	20	
AW15723 Lithium, Total	mg/L	0.000245	0.022	0.20	0.515	0.513	0.191	0.17 to 0.23	115	70 to 130	0.389	20	
AW16823 Mercury, Total by CVAA	mg/L	0.0000956	0.0005	0.004	0.00355	0.00367	0.00408	0.0034 to 0.0046	88.8	70 to 130	3.31	20	
AW15723 Barium, Total	mg/L	0.0000206	0.0044	0.10	0.105	0.110	0.0934	0.085 to 0.115	86.9	70 to 130	4.56	20	
AW15723 Boron, Total	mg/L	0.00222	0.044	1.00	1.31	1.26	0.980	0.85 to 1.15	106	70 to 130	3.89	20	
AW15723 Thallium, Total	mg/L	0.00000626	0.00044	0.10	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.0424	20	
AW15723 Beryllium, Total	mg/L	0.0000295	0.00132	0.10	0.119	0.113	0.111	0.085 to 0.115	119	70 to 130	5.29	20	
AW15723 Chromium, Total	mg/L	0.0000000206	0.0044	0.10	0.101	0.104	0.101	0.085 to 0.115	101	70 to 130	3.08	20	
AW15723 Cobalt, Total	mg/L	0.00000132	0.0044	0.10	0.106	0.107	0.0977	0.085 to 0.115	95.4	70 to 130	0.711	20	
AW15723 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0944	0.0978	0.100	0.085 to 0.115	94.4	70 to 130	3.57	20	
AW15723 Arsenic, Total	mg/L	0.0000190	0.0022	0.10	0.103	0.106	0.101	0.085 to 0.115	103	70 to 130	2.38	20	
AW15723 Cadmium, Total	mg/L	0.00000760	0.00044	0.10	0.0913	0.0924	0.0964	0.085 to 0.115	91.3	70 to 130	1.21	20	
AW15723 Calcium, Total	mg/L	0.00146	0.22	5.00	256	254	4.65	4.25 to 5.75	0.00	70 to 130	0.784	20	

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected. SGC 1/26/17
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Precision for Total Dissolved Solids is out of range.
 Limit is 5; result is 5.03. Using significant figures of PQL, result would pass as 5.0, therefore will not be qualified. SGC 11/7/16

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW15722

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW15722	Solids, Dissolved	mg/L	8.0	25			2820	47	40 to 60			5.03	5
AW15723	Fluoride, Total	mg/L	0.000	0.3	2.00	2.15	0.157	1.95	1.8 to 2.2	99.8	80 to 120	1.28	20
AW15723	Chloride, Total	mg/L	0.000	0.25	10.00	11.6	1.49	9.78	9 to 11	101	80 to 120	0.00	20
AW15723	Sulfate, Total	mg/L	0.450	1.0	1000	2100	999	19.5	18 to 22	109	80 to 120	1.10	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

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CC:

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Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 23-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW15723

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	0.0181	mg/L
* Beryllium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	7/7/2016	EPA 200.7		1.015	0.02	0.1	0.251	mg/L
* Calcium, Total	HRG	7/8/2016	EPA 200.7		10.15	1.0	5.0	256	mg/L
* Cadmium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	0.0106	mg/L
* Chromium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	7/7/2016	EPA 200.7		1.015	0.01	0.05	0.285	mg/L
* Molybdenum, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	7/6/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	7/6/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	6/27/2016	SM 2540C		1		125	1680	mg/L
* Chloride, Total	SES	6/28/2016	EPA 300.0		1	0.04	0.25	1.49	mg/L
* Fluoride, Total	SES	6/28/2016	EPA 300.0		1	0.01	0.3	J 0.155	mg/L
* Sulfate, Total	SES	6/28/2016	EPA 300.0		50	15.0	50	1010	mg/L

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 Recovery for Calcium is out of range.
 The spike amount is less than 30% of the sample amount. SGC 11/7/16

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 23-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW15723

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW15723 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.0825	0.0851	0.0880	0.085 to 0.115	82.5	70 to 130	3.03	20	
AW15723 Lead, Total	mg/L	0.00000509	0.0022	0.10	0.100	0.100	0.102	0.085 to 0.115	100	70 to 130	0.277	20	
AW15723 Molybdenum, Total	mg/L	0.0000391	0.0044	0.10	0.103	0.102	0.0982	0.085 to 0.115	103	70 to 130	0.844	20	
AW15723 Barium, Total	mg/L	0.0000206	0.0044	0.10	0.105	0.110	0.0934	0.085 to 0.115	86.9	70 to 130	4.56	20	
AW15723 Boron, Total	mg/L	0.00222	0.044	1.00	1.31	1.26	0.980	0.85 to 1.15	106	70 to 130	3.89	20	
AW15723 Thallium, Total	mg/L	0.00000626	0.00044	0.10	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.0424	20	
AW15723 Lithium, Total	mg/L	0.000245	0.022	0.20	0.515	0.513	0.191	0.17 to 0.23	115	70 to 130	0.389	20	
AW16823 Mercury, Total by CVAA	mg/L	0.0000956	0.0005	0.004	0.00355	0.00367	0.00408	0.0034 to 0.0046	88.8	70 to 130	3.31	20	
AW15723 Arsenic, Total	mg/L	0.0000190	0.0022	0.10	0.103	0.106	0.101	0.085 to 0.115	103	70 to 130	2.38	20	
AW15723 Cadmium, Total	mg/L	0.00000760	0.00044	0.10	0.0913	0.0924	0.0964	0.085 to 0.115	91.3	70 to 130	1.21	20	
AW15723 Calcium, Total	mg/L	0.00146	0.22	5.00	256	254	4.65	4.25 to 5.75	0.00	70 to 130	0.784	20	
AW15723 Beryllium, Total	mg/L	0.0000295	0.00132	0.10	0.119	0.113	0.111	0.085 to 0.115	119	70 to 130	5.29	20	
AW15723 Chromium, Total	mg/L	0.0000000206	0.0044	0.10	0.101	0.104	0.101	0.085 to 0.115	101	70 to 130	3.08	20	
AW15723 Cobalt, Total	mg/L	0.00000132	0.0044	0.10	0.106	0.107	0.0977	0.085 to 0.115	95.4	70 to 130	0.711	20	
AW15723 Selenium, Total	mg/L	0.0000480	0.0044	0.10	0.0944	0.0978	0.100	0.085 to 0.115	94.4	70 to 130	3.57	20	

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

Batch QC Summary



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 23-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW15723

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW15723	Fluoride, Total	mg/L	0.000	0.3	2.00	2.15	0.157	1.95	1.8 to 2.2	99.8	80 to 120	1.28	20
AW15723	Solids, Dissolved	mg/L	8.0	25			1700	47	40 to 60			0.741	5
AW15723	Chloride, Total	mg/L	0.000	0.25	10.00	11.6	1.49	9.78	9 to 11	101	80 to 120	0.00	20
AW15723	Sulfate, Total	mg/L	0.450	1.0	1000	2100	999	19.5	18 to 22	109	80 to 120	1.10	20

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Certificate Of Analysis  **Alabama Power**

Revised Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 23-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-10 Diss

Laboratory ID Number: AW15724

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/7/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.001	0.005	U Not Detected	mg/L
* Barium, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.002	0.01	0.0195	mg/L
* Beryllium, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.0006	0.003	U Not Detected	mg/L
* Boron, Dissolved	HRG	6/24/2016	EPA 200.7		1.015	0.02	0.1	0.266	mg/L
* Calcium, Dissolved	HRG	6/24/2016	EPA 200.7		10.15	1.0	5.0	250	mg/L
* Cadmium, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.002	0.01	0.0192	mg/L
* Chromium, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.002	0.01	U Not Detected	mg/L
* Mercury, Dissolved by CVAA	MCW	7/8/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Dissolved	HRG	6/24/2016	EPA 200.7		1.015	0.01	0.05	0.308	mg/L
* Molybdenum, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.002	0.01	U Not Detected	mg/L
* Lead, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.001	0.005	U Not Detected	mg/L
* Selenium, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.002	0.01	U Not Detected	mg/L
* Thallium, Dissolved	ABB	7/5/2016	EPA 200.8		5.025	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Chloride, Dissolved	SES	6/28/2016	EPA 300.0		1	0.04	0.25	1.55	mg/L
Fluoride, Dissolved	SES	6/28/2016	EPA 300.0		1	0.01	0.3	J 0.164	mg/L
Sulfate, Dissolved	SES	6/28/2016	EPA 300.0		50	15.0	50	1040	mg/L

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Comments: REVISED COPY: Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/17/17
 Recovery for Calcium is out of range.
 The spike amount is less than 30% of the sample amount. SGC 11/7/16

Revised Copy



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 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 23-Jun-16
 Customer ID:
 Delivery Date: 24-Jun-16

Description: Gorgas Landfill - MW-10 Diss

Laboratory ID Number: AW15724

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB	Rec		Prec	Limit
			Limit	Spike					Rec	Limit		
AW15724 Arsenic, Dissolved	mg/L	0.0000130	0.0022	0.10	0.0982	0.0986			98.2	70 to 130	0.423	20
AW15724 Chromium, Dissolved	mg/L	0.00000101	0.0044	0.10	0.0976	0.0977			97.6	70 to 130	0.0841	20
AW15724 Lead, Dissolved	mg/L	0.0000310	0.0022	0.10	0.0961	0.0965			96.1	70 to 130	0.407	20
AW15724 Barium, Dissolved	mg/L	0.000000732	0.0044	0.10	0.115	0.112			95.5	70 to 130	2.58	20
AW15724 Boron, Dissolved	mg/L	0.00108	0.044	1.00	1.28	1.28	0.944	0.85 to 1.15	101	70 to 130	0.00	20
AW15724 Antimony, Dissolved	mg/L	0.000112	0.00132	0.10	0.0894	0.0885			89.4	70 to 130	0.978	20
AW15724 Calcium, Dissolved	mg/L	-0.000831	0.22	5.00	260	270	5.11	4.25 to 5.75	200	70 to 130	3.77	20
AW15724 Thallium, Dissolved	mg/L	0.0000273	0.00044	0.10	0.0986	0.0994			98.6	70 to 130	0.754	20
AW15724 Cadmium, Dissolved	mg/L	0.00000299	0.00044	0.10	0.0970	0.0965			97.0	70 to 130	0.541	20
AW15724 Cobalt, Dissolved	mg/L	0.00000150	0.0044	0.10	0.113	0.114			93.8	70 to 130	0.958	20
AW15724 Beryllium, Dissolved	mg/L	0.0000414	0.00132	0.10	0.102	0.104			102	70 to 130	1.65	20
AW15724 Lithium, Dissolved	mg/L	-0.000125	0.022	0.20	0.540	0.541	0.195	0.17 to 0.23	116	70 to 130	0.185	20
AW15724 Mercury, Dissolved by CVAA	mg/L	0.0000969	0.0005	0.004	0.00404	0.00411	0.00402	0.0034 to 0.0046	101	70 to 130	1.70	20
AW15724 Molybdenum, Dissolved	mg/L	0.0000268	0.0044	0.10	0.0999	0.0990			99.9	70 to 130	0.941	20
AW15724 Selenium, Dissolved	mg/L	0.0000239	0.0044	0.10	0.0904	0.0909			90.4	70 to 130	0.507	20

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Description: Gorgas Landfill - MW-10 Diss

Laboratory ID Number: AW15724

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW15724	Sulfate, Dissolved	mg/L	0.456	1.0	1000	2090	1040	19.6	18 to 22	105	80 to 120	0.00	20
AW15724	Fluoride, Dissolved	mg/L	0.000	0.3	2.00	2.28	0.160	1.97	1.8 to 2.2	106	80 to 120	2.47	20
AW15724	Chloride, Dissolved	mg/L	0.000	0.25	10.00	11.3	1.54	9.80	9 to 11	97.5	80 to 120	0.582	20

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Recovery for Calcium is out of range.

The spike amount is less than 30% of the sample amount. SGC 11/7/16

CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 **06/22/2016 15:00**

Requested Complete Date	Routine	Results To	Dustin Brooks
Site Representative	Bruce Williams	Requested By	Greg Dyer
Collector	Nick Pitts	Location	Gorgas Landfill
Analysis Requested	Bottle 1: Radium 226 & 228 (1) 1L bottle, Bottle 2: Metals and Hg (1) 500 mL bottle, Bottle 3: TDS and Anions (1) 500 mL bottle		
Comments			

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-9	06/20/2016	16:38	3	Groundwater		AW15629
MW-13	06/22/2016	08:50	3	Groundwater		AW15630
MW-14	06/22/2016	09:45	3	Groundwater		AW15631
EB-1	06/22/2016	10:10	3	Equipment Blank		AW15632

Relinquished By	Received By	Date/Time
		06/22/2016 10:27
Lee Coxwell <small>Digitally signed by Lee Coxwell DN: cn=Lee Coxwell, o=Alabama Power Company, ou, email=lhcoxwell@southernco.com, c=US Date: 2016.06.22 14:30:55 -05'00'</small>	Sarah Copeland <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o, ou, email=sgcopela@southernco.com, c=US Date: 2016.06.22 15:02:08 -05'00'</small>	06/22/2016 15:00

SmarTroll ID	4696-23441-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20010-2-2	
Cooler Temp	1.0	
Thermometer ID	1506-3968-4-4	
pH Strip ID	4831-24376-20-3	



Chain of Custody

Groundwater

APC General Testing Laboratory
General Service Complex Building 8

Field Complete

Lab Complete

Lab ETA

Requested Complete Date
 Site Representative
 Collector

Results To
 Requested By
 Location

Analysis Requested
 Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	06/20/2016	12:05	3	Groundwater		AW15618
MW-2	06/20/2016	13:43	3	Groundwater		AW15619
MW-2 Dup	06/20/2016	13:43	3	Sample Duplicate		AW15620
MW-4	06/20/2016	17:15	3	Groundwater		AW15621
MW-8	06/21/2016	10:35	3	Groundwater		AW15622
MW-7	06/21/2016	11:53	3	Groundwater		AW15623
MW-6	06/21/2016	13:30	3	Groundwater		AW15624
FB-1	06/21/2016	13:55	3	Field Blank		AW15625
MW-5	06/21/2016	15:25	3	Groundwater		AW15626
MW-16	06/22/2016	09:15	3	Groundwater		AW15627
MW-18	06/22/2016	10:35	3	Groundwater		AW15628

Relinquished By	Received By	Date/Time
		06/22/2016 10:50
Lee Coxwell <small>Digitally signed by Lee Coxwell DN: cn=Lee Coxwell, o=Alabama Power Company, ou, email=lhcoxwell@southernco.com, c=US Date: 2016.06.22 14:31:13 -05'00'</small>	Sarah Copeland <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o, ou, email=sgcopela@southernco.com, c=US Date: 2016.06.22 15:00:36 -05'00'</small>	06/22/2016 15:00

SmarTroll ID
 Turbidity ID

All metals and radiological bottles have pH < 2
 Cooler Temp
 Thermometer ID
 pH Strip ID



Chain of Custody

Groundwater

APC General Testing Laboratory
General Service Complex Building 8

Field Complete
 Lab Complete

Lab ETA **06/23/2016 10:00**

Requested Complete Date	Routine	Results To	Dustin Brooks
Site Representative	Bruce Williams	Requested By	Greg Dyer
Collector	Nick Pitts	Location	Gorgas Landfill
Analysis Requested	Bottle 1: Radium 226 & 228 (1) 1L bottle, Bottle 2: Metals and Hg (1) 500 mL bottle, Bottle 3: TDS and Anions (1) 500 mL bottle		
Comments			

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-15	06/22/2016	10:48	3	Groundwater		AW15672
MW-3	06/22/2016	13:10	3	Groundwater		AW15673
MW-12	06/22/2016	16:32	3	Groundwater		AW15674

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: 2016.06.23 09:30:10 -05'00'</small>	06/23/2016 09:30

SmarTroll ID	4696-23441-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20010-2-2	Cooler Temp
		1.9 degrees C
		Thermometer ID
		1506-3968-4-4
		pH Strip ID
		4831-24376-20-3



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

Field Complete
 Lab Complete

Lab ETA **06/23/2016 15:45**

Requested Complete Date	Routine	Results To	Dustin Brooks
Site Representative	Bruce Williams	Requested By	Greg Dyer
Collector	Jason Rouss	Location	Gorgas Landfill

Analysis Requested	Bottle 1: Radium 226 & 228 (1) 1L bottle, Bottle 2: Metals and Hg (1) 500 mL bottle, Bottle 3: TDS and Anions (1) 500 mL bottle
Comments	Added 3.0mL HNO3 to Bottle 2; added 6.0mL HNO3 to Bottle 1 (AW15724) 6/24/16 SGC

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-19	06/22/2016	12:10	3	Groundwater		AW15718
FB-2	06/22/2016	12:17	3	Field Blank		AW15719
MW-20	06/22/2016	13:30	3	Groundwater		AW15720
MW-20 Dup	06/22/2016	13:30	3	Sample Duplicate		AW15721
MW-11	06/22/2016	15:15	4	Groundwater		AW15722
MW-10	06/23/2016	13:05	3	Groundwater		AW15723
MW-10 Dis	06/23/2016	13:25	3	Groundwater	<input checked="" type="checkbox"/>	AW15724

Relinquished By 	Received By 	Date/Time 06/23/2016 16:11

SmarTroll ID 4696-23444-3-3
 Turbidity ID 4677-23342-4-1

All metals and radiological bottles have pH < 2

Cooler Temp 1.8
 Thermometer ID 1506-3968-4-4
 pH Strip ID 4831-24376-20-3

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: 400-123621-1

TestAmerica Sample Delivery Group: Gorgas Landfill (2)

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:

7/31/2016 10:37:30 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@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: 400-123621-1
SDG: Gorgas Landfill (2)

Job ID: 400-123621-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-123621-1

RAD

Method(s) PrecSep_0: Radium-228 prep batch 160-259399: Only 1L was received for the following samples. The samples were weighed at a 750 mL versus the normal 1000 mL, and a laboratory control sample and laboratory control sample duplicate were used instead of a sample duplicate. The reduced aliquot should not affect the RL. AW15618 MW-1 (400-123621-1), AW15619 MW-2 (400-123621-2), AW15620 MW-2 DUP (400-123621-3), AW15621 MW-4 (400-123621-4), AW15622 MW-8 (400-123621-5), AW15623 MW-7 (400-123621-6), AW15624 MW-6 (400-123621-7), AW15625 FB-1 (400-123621-8), AW15626 MW-5 (400-123621-9), AW15627 MW-16 (400-123621-10), AW15628 MW-18 (400-123621-11), AW15629 MW-9 (400-123621-12), AW15630 MW-13 (400-123621-13), AW15631 MW-14 (400-123621-14), AW15632 EB-1 (400-123621-15), AW15672 MW-15 (400-123621-16), AW15673 MW-3 (400-123621-17), AW15674 MW-12 (400-123621-18), AW15718 MW-19 (400-123621-19) and AW15719 FB-2 (400-123621-20)

Method(s) PrecSep_0: Radium-228 prep batch 160-259562: Only 1L arrived for the following samples. The samples were weighed at a reduced aliquot of 750 mL versus the normal aliquot of 1000 mL. The reduced aliquot should not affect the RL. AW15720 MW-20 (400-123621-21), AW15721 MW-20 DUP (400-123621-22), AW15723 MW-10 (400-123621-24) and AW15724 MW-10 DISSOLVED (400-123621-25)

Method(s) PrecSep-21: Radium-226 prep batch 160-259397: Only 1L was received for the following samples. The samples were weighed at a 750 mL versus the normal 1000 mL, and a laboratory control sample and laboratory control sample duplicate were used instead of a sample duplicate. The reduced aliquot should not affect the RL. AW15618 MW-1 (400-123621-1), AW15619 MW-2 (400-123621-2), AW15620 MW-2 DUP (400-123621-3), AW15621 MW-4 (400-123621-4), AW15622 MW-8 (400-123621-5), AW15623 MW-7 (400-123621-6), AW15624 MW-6 (400-123621-7), AW15625 FB-1 (400-123621-8), AW15626 MW-5 (400-123621-9), AW15627 MW-16 (400-123621-10), AW15628 MW-18 (400-123621-11), AW15629 MW-9 (400-123621-12), AW15630 MW-13 (400-123621-13), AW15631 MW-14 (400-123621-14), AW15632 EB-1 (400-123621-15), AW15672 MW-15 (400-123621-16), AW15673 MW-3 (400-123621-17), AW15674 MW-12 (400-123621-18), AW15718 MW-19 (400-123621-19) and AW15719 FB-2 (400-123621-20)

Method(s) PrecSep-21: Radium-226 prep batch 160-259558: Only 1L arrived for the following samples. The samples were weighed at a reduced aliquot of 750 mL versus the normal aliquot of 1000 mL. The reduced aliquot should not affect the RL. AW15720 MW-20 (400-123621-21), AW15721 MW-20 DUP (400-123621-22), AW15723 MW-10 (400-123621-24) and AW15724 MW-10 DISSOLVED (400-123621-25)

Method Summary

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

TestAmerica Job ID: 400-123621-1
SDG: Gorgas Landfill (2)

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: 400-123621-1
SDG: Gorgas Landfill (2)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-123621-1	AW15618 MW-1	Water	06/20/16 12:05	06/28/16 15:45
400-123621-2	AW15619 MW-2	Water	06/20/16 13:43	06/28/16 15:45
400-123621-3	AW15620 MW-2 DUP	Water	06/20/16 13:43	06/28/16 15:45
400-123621-4	AW15621 MW-4	Water	06/20/16 17:15	06/28/16 15:45
400-123621-5	AW15622 MW-8	Water	06/21/16 10:35	06/28/16 15:45
400-123621-6	AW15623 MW-7	Water	06/21/16 11:53	06/28/16 15:45
400-123621-7	AW15624 MW-6	Water	06/21/16 13:30	06/28/16 15:45
400-123621-8	AW15625 FB-1	Water	06/21/16 13:55	06/28/16 15:45
400-123621-9	AW15626 MW-5	Water	06/21/16 15:25	06/28/16 15:45
400-123621-10	AW15627 MW-16	Water	06/22/16 09:15	06/28/16 15:45
400-123621-11	AW15628 MW-18	Water	06/22/16 10:35	06/28/16 15:45
400-123621-12	AW15629 MW-9	Water	06/20/16 16:38	06/28/16 15:45
400-123621-13	AW15630 MW-13	Water	06/22/16 08:50	06/28/16 15:45
400-123621-14	AW15631 MW-14	Water	06/22/16 09:45	06/28/16 15:45
400-123621-15	AW15632 EB-1	Water	06/22/16 10:10	06/28/16 15:45
400-123621-16	AW15672 MW-15	Water	06/22/16 10:48	06/28/16 15:45
400-123621-17	AW15673 MW-3	Water	06/22/16 13:10	06/28/16 15:45
400-123621-18	AW15674 MW-12	Water	06/22/16 16:32	06/28/16 15:45
400-123621-19	AW15718 MW-19	Water	06/22/16 12:10	06/28/16 15:45
400-123621-20	AW15719 FB-2	Water	06/22/16 12:17	06/28/16 15:45
400-123621-21	AW15720 MW-20	Water	06/22/16 13:30	06/28/16 15:45
400-123621-22	AW15721 MW-20 DUP	Water	06/22/16 13:30	06/28/16 15:45
400-123621-23	AW15722 MW-11	Water	06/22/16 15:15	06/28/16 15:45
400-123621-24	AW15723 MW-10	Water	06/23/16 13:05	06/28/16 15:45
400-123621-25	AW15724 MW-10 DISSOLVED	Water	06/23/16 13:25	06/28/16 15:45

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15618 MW-1

Lab Sample ID: 400-123621-1

Date Collected: 06/20/16 12:05

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00724	U	0.0814	0.0814	1.00	0.158	pCi/L	07/06/16 14:36	07/28/16 07:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					07/06/16 14:36	07/28/16 07:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.152	U	0.346	0.346	1.00	0.595	pCi/L	07/06/16 14:36	07/25/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					07/06/16 14:36	07/25/16 13:37	1
Y Carrier	86.0		40 - 110					07/06/16 14:36	07/25/16 13:37	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	0.159	U	0.356	0.356	5.00	0.595	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15619 MW-2

Lab Sample ID: 400-123621-2

Date Collected: 06/20/16 13:43

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.122	U	0.0990	0.0996	1.00	0.149	pCi/L	07/06/16 14:36	07/28/16 07:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					07/06/16 14:36	07/28/16 07:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.173	U	0.294	0.294	1.00	0.498	pCi/L	07/06/16 14:36	07/25/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					07/06/16 14:36	07/25/16 13:37	1
Y Carrier	87.9		40 - 110					07/06/16 14:36	07/25/16 13:37	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	0.295	U	0.310	0.311	5.00	0.498	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15620 MW-2 DUP

Lab Sample ID: 400-123621-3

Date Collected: 06/20/16 13:43

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.154		0.104	0.104	1.00	0.146	pCi/L	07/06/16 14:36	07/28/16 07:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					07/06/16 14:36	07/28/16 07:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.282	U	0.378	0.379	1.00	0.629	pCi/L	07/06/16 14:36	07/25/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					07/06/16 14:36	07/25/16 13:37	1
Y Carrier	82.6		40 - 110					07/06/16 14:36	07/25/16 13:37	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	0.436	U	0.392	0.393	5.00	0.629	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15621 MW-4

Lab Sample ID: 400-123621-4

Date Collected: 06/20/16 17:15

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0658	U	0.106	0.106	1.00	0.182	pCi/L	07/06/16 14:36	07/28/16 07:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					07/06/16 14:36	07/28/16 07:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.221	U	0.320	0.320	1.00	0.536	pCi/L	07/06/16 14:36	07/25/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					07/06/16 14:36	07/25/16 13:37	1
Y Carrier	89.3		40 - 110					07/06/16 14:36	07/25/16 13:37	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.287	U	0.337	0.338	5.00	0.536	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15622 MW-8

Lab Sample ID: 400-123621-5

Date Collected: 06/21/16 10:35

Matrix: Water

Date Received: 06/28/16 15:45

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	U	0.100	0.101	1.00	0.152	pCi/L	07/06/16 14:36	07/28/16 08:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					07/06/16 14:36	07/28/16 08:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.409	U	0.327	0.329	1.00	0.518	pCi/L	07/06/16 14:36	07/25/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					07/06/16 14:36	07/25/16 13:37	1
Y Carrier	89.3		40 - 110					07/06/16 14:36	07/25/16 13:37	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.529		0.342	0.344	5.00	0.518	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15623 MW-7

Lab Sample ID: 400-123621-6

Date Collected: 06/21/16 11:53

Matrix: Water

Date Received: 06/28/16 15:45

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	U	0.0962	0.0968	1.00	0.141	pCi/L	07/06/16 14:36	07/28/16 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/06/16 14:36	07/28/16 11:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0238	U	0.302	0.302	1.00	0.537	pCi/L	07/06/16 14:36	07/25/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/06/16 14:36	07/25/16 13:37	1
Y Carrier	87.1		40 - 110					07/06/16 14:36	07/25/16 13:37	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	0.151	U	0.317	0.317	5.00	0.537	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15624 MW-6

Lab Sample ID: 400-123621-7

Date Collected: 06/21/16 13:30

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.386		0.136	0.140	1.00	0.147	pCi/L	07/06/16 14:36	07/28/16 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/06/16 14:36	07/28/16 11:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.362	U	0.360	0.362	1.00	0.585	pCi/L	07/06/16 14:36	07/25/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/06/16 14:36	07/25/16 13:37	1
Y Carrier	85.2		40 - 110					07/06/16 14:36	07/25/16 13:37	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.748		0.385	0.388	5.00	0.585	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15625 FB-1

Lab Sample ID: 400-123621-8

Date Collected: 06/21/16 13:55

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00357	U	0.0679	0.0679	1.00	0.140	pCi/L	07/06/16 14:36	07/28/16 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					07/06/16 14:36	07/28/16 11:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0580	U	0.279	0.279	1.00	0.496	pCi/L	07/06/16 14:36	07/25/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					07/06/16 14:36	07/25/16 13:37	1
Y Carrier	87.5		40 - 110					07/06/16 14:36	07/25/16 13:37	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	0.0544	U	0.287	0.287	5.00	0.496	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15626 MW-5

Lab Sample ID: 400-123621-9

Date Collected: 06/21/16 15:25

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.178		0.105	0.106	1.00	0.143	pCi/L	07/06/16 14:36	07/28/16 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					07/06/16 14:36	07/28/16 11:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.126	U	0.287	0.288	1.00	0.495	pCi/L	07/06/16 14:36	07/25/16 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					07/06/16 14:36	07/25/16 13:37	1
Y Carrier	87.1		40 - 110					07/06/16 14:36	07/25/16 13:37	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	0.304	U	0.306	0.307	5.00	0.495	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15627 MW-16

Lab Sample ID: 400-123621-10

Date Collected: 06/22/16 09:15

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.118	U	0.0964	0.0970	1.00	0.145	pCi/L	07/06/16 14:36	07/28/16 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/06/16 14:36	07/28/16 11:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.112	U	0.330	0.330	1.00	0.569	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	90.1		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.231	U	0.343	0.344	5.00	0.569	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15628 MW-18

Lab Sample ID: 400-123621-11

Date Collected: 06/22/16 10:35

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0481	U	0.0832	0.0834	1.00	0.145	pCi/L	07/06/16 14:36	07/28/16 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/06/16 14:36	07/28/16 11:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0607	U	0.333	0.333	1.00	0.584	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	85.2		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.109	U	0.343	0.343	5.00	0.584	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15629 MW-9

Lab Sample ID: 400-123621-12

Date Collected: 06/20/16 16:38

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.109	U	0.0934	0.0939	1.00	0.143	pCi/L	07/06/16 14:36	07/28/16 11:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					07/06/16 14:36	07/28/16 11:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.101	U	0.319	0.319	1.00	0.554	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	85.2		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.210	U	0.332	0.333	5.00	0.554	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15630 MW-13

Lab Sample ID: 400-123621-13

Date Collected: 06/22/16 08:50

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.154		0.0992	0.100	1.00	0.135	pCi/L	07/06/16 14:36	07/28/16 11:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					07/06/16 14:36	07/28/16 11:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.668		0.389	0.394	1.00	0.595	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	87.1		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.822		0.401	0.406	5.00	0.595	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15631 MW-14

Lab Sample ID: 400-123621-14

Date Collected: 06/22/16 09:45

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.100	U	0.123	0.123	1.00	0.203	pCi/L	07/06/16 14:36	07/28/16 11:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					07/06/16 14:36	07/28/16 11:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.193	U	0.285	0.285	1.00	0.478	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	88.2		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.293	U	0.310	0.310	5.00	0.478	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15632 EB-1

Lab Sample ID: 400-123621-15

Date Collected: 06/22/16 10:10

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00326	U	0.0645	0.0645	1.00	0.132	pCi/L	07/06/16 14:36	07/28/16 15:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110					07/06/16 14:36	07/28/16 15:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0225	U	0.327	0.327	1.00	0.577	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	87.1		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.0193	U	0.334	0.334	5.00	0.577	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15672 MW-15

Lab Sample ID: 400-123621-16

Date Collected: 06/22/16 10:48

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.256		0.117	0.119	1.00	0.144	pCi/L	07/06/16 14:36	07/28/16 15:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/06/16 14:36	07/28/16 15:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0612	U	0.313	0.313	1.00	0.551	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	88.2		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.318	U	0.334	0.335	5.00	0.551	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15673 MW-3

Lab Sample ID: 400-123621-17

Date Collected: 06/22/16 13:10

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0451	U	0.0728	0.0729	1.00	0.126	pCi/L	07/06/16 14:36	07/28/16 15:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					07/06/16 14:36	07/28/16 15:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.155	U	0.305	0.306	1.00	0.520	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	89.0		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.200	U	0.314	0.314	5.00	0.520	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15674 MW-12

Lab Sample ID: 400-123621-18

Date Collected: 06/22/16 16:32

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.143		0.0979	0.0988	1.00	0.140	pCi/L	07/06/16 14:36	07/28/16 15:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/06/16 14:36	07/28/16 15:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307	U	0.314	0.315	1.00	0.510	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	89.0		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.450	U	0.329	0.330	5.00	0.510	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15718 MW-19

Lab Sample ID: 400-123621-19

Date Collected: 06/22/16 12:10

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.187		0.105	0.107	1.00	0.141	pCi/L	07/06/16 14:36	07/28/16 15:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/06/16 14:36	07/28/16 15:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.349	U	0.326	0.328	1.00	0.524	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	76.3		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.536		0.343	0.345	5.00	0.524	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15719 FB-2

Lab Sample ID: 400-123621-20

Date Collected: 06/22/16 12:17

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0172	U	0.0650	0.0650	1.00	0.137	pCi/L	07/06/16 14:36	07/28/16 15:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110					07/06/16 14:36	07/28/16 15:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.142	U	0.313	0.313	1.00	0.535	pCi/L	07/06/16 14:36	07/25/16 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110					07/06/16 14:36	07/25/16 13:39	1
Y Carrier	89.3		40 - 110					07/06/16 14:36	07/25/16 13:39	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	0.125	U	0.319	0.319	5.00	0.535	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15720 MW-20

Lab Sample ID: 400-123621-21

Date Collected: 06/22/16 13:30

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.268		0.166	0.168	1.00	0.228	pCi/L	07/07/16 11:25	07/29/16 07:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					07/07/16 11:25	07/29/16 07:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.327	U	0.298	0.300	1.00	0.478	pCi/L	07/07/16 11:25	07/28/16 13:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					07/07/16 11:25	07/28/16 13:04	1
Y Carrier	85.2		40 - 110					07/07/16 11:25	07/28/16 13:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.595		0.341	0.344	5.00	0.478	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15721 MW-20 DUP

Lab Sample ID: 400-123621-22

Date Collected: 06/22/16 13:30

Matrix: Water

Date Received: 06/28/16 15:45

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		0.177	0.179	1.00	0.227	pCi/L	07/07/16 11:25	07/29/16 07:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					07/07/16 11:25	07/29/16 07:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.807		0.362	0.370	1.00	0.512	pCi/L	07/07/16 11:25	07/28/16 13:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					07/07/16 11:25	07/28/16 13:04	1
Y Carrier	81.1		40 - 110					07/07/16 11:25	07/28/16 13:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.14		0.403	0.411	5.00	0.512	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15722 MW-11

Lab Sample ID: 400-123621-23

Date Collected: 06/22/16 15:15

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.359		0.151	0.154	1.00	0.179	pCi/L	07/07/16 11:25	07/29/16 07:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/07/16 11:25	07/29/16 07:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.365	U	0.261	0.264	1.00	0.407	pCi/L	07/07/16 11:25	07/28/16 13:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/07/16 11:25	07/28/16 13:04	1
Y Carrier	82.2		40 - 110					07/07/16 11:25	07/28/16 13:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.724		0.302	0.305	5.00	0.407	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15723 MW-10

Lab Sample ID: 400-123621-24

Date Collected: 06/23/16 13:05

Matrix: Water

Date Received: 06/28/16 15:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.187	U	0.147	0.148	1.00	0.216	pCi/L	07/07/16 11:25	07/29/16 07:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/07/16 11:25	07/29/16 07:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.264	U	0.295	0.296	1.00	0.484	pCi/L	07/07/16 11:25	07/28/16 13:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/07/16 11:25	07/28/16 13:04	1
Y Carrier	92.0		40 - 110					07/07/16 11:25	07/28/16 13:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.451	U	0.330	0.331	5.00	0.484	pCi/L		07/30/16 00:23	1

Client Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15724 MW-10 DISSOLVED

Lab Sample ID: 400-123621-25

Date Collected: 06/23/16 13:25

Matrix: Water

Date Received: 06/28/16 15:45

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0652	U	0.134	0.134	1.00	0.238	pCi/L	07/07/16 11:25	07/29/16 07:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/07/16 11:25	07/29/16 07:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.252	U	0.310	0.311	1.00	0.514	pCi/L	07/07/16 11:25	07/28/16 13:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/07/16 11:25	07/28/16 13:04	1
Y Carrier	86.0		40 - 110					07/07/16 11:25	07/28/16 13:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.3172		0.348	0.339	5.00	0.514	pCi/L		07/30/16 00:14	1

Definitions/Glossary

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

TestAmerica Job ID: 400-123621-1
SDG: Gorgas Landfill (2)

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15618 MW-1

Lab Sample ID: 400-123621-1

Date Collected: 06/20/16 12:05

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 07:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261836	07/25/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15619 MW-2

Lab Sample ID: 400-123621-2

Date Collected: 06/20/16 13:43

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 07:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261836	07/25/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15620 MW-2 DUP

Lab Sample ID: 400-123621-3

Date Collected: 06/20/16 13:43

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 07:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261836	07/25/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15621 MW-4

Lab Sample ID: 400-123621-4

Date Collected: 06/20/16 17:15

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 07:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261836	07/25/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123621-1
SDG: Gorgas Landfill (2)

Client Sample ID: AW15622 MW-8

Lab Sample ID: 400-123621-5

Date Collected: 06/21/16 10:35

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 08:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261836	07/25/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15623 MW-7

Lab Sample ID: 400-123621-6

Date Collected: 06/21/16 11:53

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 11:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261836	07/25/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15624 MW-6

Lab Sample ID: 400-123621-7

Date Collected: 06/21/16 13:30

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 11:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261836	07/25/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15625 FB-1

Lab Sample ID: 400-123621-8

Date Collected: 06/21/16 13:55

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 11:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261836	07/25/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15626 MW-5

Lab Sample ID: 400-123621-9

Date Collected: 06/21/16 15:25

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 11:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261836	07/25/16 13:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15627 MW-16

Lab Sample ID: 400-123621-10

Date Collected: 06/22/16 09:15

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 11:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15628 MW-18

Lab Sample ID: 400-123621-11

Date Collected: 06/22/16 10:35

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 11:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15629 MW-9

Lab Sample ID: 400-123621-12

Date Collected: 06/20/16 16:38

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 11:40	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15630 MW-13

Lab Sample ID: 400-123621-13

Date Collected: 06/22/16 08:50

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262456	07/28/16 11:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15631 MW-14

Lab Sample ID: 400-123621-14

Date Collected: 06/22/16 09:45

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262456	07/28/16 11:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15632 EB-1

Lab Sample ID: 400-123621-15

Date Collected: 06/22/16 10:10

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 15:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15672 MW-15

Lab Sample ID: 400-123621-16

Date Collected: 06/22/16 10:48

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 15:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15673 MW-3

Lab Sample ID: 400-123621-17

Date Collected: 06/22/16 13:10

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 15:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15674 MW-12

Lab Sample ID: 400-123621-18

Date Collected: 06/22/16 16:32

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 15:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15718 MW-19

Lab Sample ID: 400-123621-19

Date Collected: 06/22/16 12:10

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 15:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15719 FB-2

Lab Sample ID: 400-123621-20

Date Collected: 06/22/16 12:17

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259397	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9315		1	262466	07/28/16 15:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259399	07/06/16 14:36	SCB	TAL SL
Total/NA	Analysis	9320		1	261843	07/25/16 13:39	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Client Sample ID: AW15720 MW-20

Lab Sample ID: 400-123621-21

Date Collected: 06/22/16 13:30

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262648	07/29/16 07:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:04	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15721 MW-20 DUP

Lab Sample ID: 400-123621-22

Date Collected: 06/22/16 13:30

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262648	07/29/16 07:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:04	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15722 MW-11

Lab Sample ID: 400-123621-23

Date Collected: 06/22/16 15:15

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262648	07/29/16 07:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:04	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Client Sample ID: AW15723 MW-10

Lab Sample ID: 400-123621-24

Date Collected: 06/23/16 13:05

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262648	07/29/16 07:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:04	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123621-1
SDG: Gorgas Landfill (2)

Client Sample ID: AW15724 MW-10 DISSOLVED

Lab Sample ID: 400-123621-25

Date Collected: 06/23/16 13:25

Matrix: Water

Date Received: 06/28/16 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	PrecSep-21			259558	07/07/16 11:25	SCB	TAL SL
Dissolved	Analysis	9315		1	262648	07/29/16 07:15	RTM	TAL SL
Dissolved	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Dissolved	Analysis	9320		1	262450	07/28/16 13:04	RTM	TAL SL
Dissolved	Analysis	Ra226_Ra228		1	262765	07/30/16 00:14	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: 400-123621-1
 SDG: Gorgas Landfill (2)

Rad

Prep Batch: 259397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123621-1	AW15618 MW-1	Total/NA	Water	PrecSep-21	
400-123621-2	AW15619 MW-2	Total/NA	Water	PrecSep-21	
400-123621-3	AW15620 MW-2 DUP	Total/NA	Water	PrecSep-21	
400-123621-4	AW15621 MW-4	Total/NA	Water	PrecSep-21	
400-123621-5	AW15622 MW-8	Total/NA	Water	PrecSep-21	
400-123621-6	AW15623 MW-7	Total/NA	Water	PrecSep-21	
400-123621-7	AW15624 MW-6	Total/NA	Water	PrecSep-21	
400-123621-8	AW15625 FB-1	Total/NA	Water	PrecSep-21	
400-123621-9	AW15626 MW-5	Total/NA	Water	PrecSep-21	
400-123621-10	AW15627 MW-16	Total/NA	Water	PrecSep-21	
400-123621-11	AW15628 MW-18	Total/NA	Water	PrecSep-21	
400-123621-12	AW15629 MW-9	Total/NA	Water	PrecSep-21	
400-123621-13	AW15630 MW-13	Total/NA	Water	PrecSep-21	
400-123621-14	AW15631 MW-14	Total/NA	Water	PrecSep-21	
400-123621-15	AW15632 EB-1	Total/NA	Water	PrecSep-21	
400-123621-16	AW15672 MW-15	Total/NA	Water	PrecSep-21	
400-123621-17	AW15673 MW-3	Total/NA	Water	PrecSep-21	
400-123621-18	AW15674 MW-12	Total/NA	Water	PrecSep-21	
400-123621-19	AW15718 MW-19	Total/NA	Water	PrecSep-21	
400-123621-20	AW15719 FB-2	Total/NA	Water	PrecSep-21	
MB 160-259397/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-259397/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-259397/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 259399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123621-1	AW15618 MW-1	Total/NA	Water	PrecSep_0	
400-123621-2	AW15619 MW-2	Total/NA	Water	PrecSep_0	
400-123621-3	AW15620 MW-2 DUP	Total/NA	Water	PrecSep_0	
400-123621-4	AW15621 MW-4	Total/NA	Water	PrecSep_0	
400-123621-5	AW15622 MW-8	Total/NA	Water	PrecSep_0	
400-123621-6	AW15623 MW-7	Total/NA	Water	PrecSep_0	
400-123621-7	AW15624 MW-6	Total/NA	Water	PrecSep_0	
400-123621-8	AW15625 FB-1	Total/NA	Water	PrecSep_0	
400-123621-9	AW15626 MW-5	Total/NA	Water	PrecSep_0	
400-123621-10	AW15627 MW-16	Total/NA	Water	PrecSep_0	
400-123621-11	AW15628 MW-18	Total/NA	Water	PrecSep_0	
400-123621-12	AW15629 MW-9	Total/NA	Water	PrecSep_0	
400-123621-13	AW15630 MW-13	Total/NA	Water	PrecSep_0	
400-123621-14	AW15631 MW-14	Total/NA	Water	PrecSep_0	
400-123621-15	AW15632 EB-1	Total/NA	Water	PrecSep_0	
400-123621-16	AW15672 MW-15	Total/NA	Water	PrecSep_0	
400-123621-17	AW15673 MW-3	Total/NA	Water	PrecSep_0	
400-123621-18	AW15674 MW-12	Total/NA	Water	PrecSep_0	
400-123621-19	AW15718 MW-19	Total/NA	Water	PrecSep_0	
400-123621-20	AW15719 FB-2	Total/NA	Water	PrecSep_0	
MB 160-259399/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-259399/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-259399/3-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: 400-123621-1
SDG: Gorgas Landfill (2)

Rad (Continued)

Prep Batch: 259558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123621-21	AW15720 MW-20	Total/NA	Water	PrecSep-21	
400-123621-22	AW15721 MW-20 DUP	Total/NA	Water	PrecSep-21	
400-123621-23	AW15722 MW-11	Total/NA	Water	PrecSep-21	
400-123621-24	AW15723 MW-10	Total/NA	Water	PrecSep-21	
400-123621-25	AW15724 MW-10 DISSOLVED	Dissolved	Water	PrecSep-21	
MB 160-259558/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-259558/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-123939-A-1-B DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 259562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123621-21	AW15720 MW-20	Total/NA	Water	PrecSep_0	
400-123621-22	AW15721 MW-20 DUP	Total/NA	Water	PrecSep_0	
400-123621-23	AW15722 MW-11	Total/NA	Water	PrecSep_0	
400-123621-24	AW15723 MW-10	Total/NA	Water	PrecSep_0	
400-123621-25	AW15724 MW-10 DISSOLVED	Dissolved	Water	PrecSep_0	
MB 160-259562/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-259562/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-123939-A-1-D DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-259397/1-A
Matrix: Water
Analysis Batch: 262466

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259397

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.005421	U	0.0738	0.0738	1.00	0.146	pCi/L	07/06/16 14:36	07/28/16 07:56	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					07/06/16 14:36	07/28/16 07:56	1
	89.2									

Lab Sample ID: LCS 160-259397/2-A
Matrix: Water
Analysis Batch: 262466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259397

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	14.9	19.09		1.89	1.00	0.146	pCi/L	128	68 - 137		
Carrier	LCS LCS		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
	93.7										

Lab Sample ID: LCSD 160-259397/3-A
Matrix: Water
Analysis Batch: 262466

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 259397

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	14.9	19.51		1.94	1.00	0.133	pCi/L	131	68 - 137	0.11	1
Carrier	LCSD LCSD		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
	93.4										

Lab Sample ID: MB 160-259558/1-A
Matrix: Water
Analysis Batch: 262648

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259558

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.09751	U	0.0993	0.0997	1.00	0.156	pCi/L	07/07/16 11:25	07/29/16 07:14	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					07/07/16 11:25	07/29/16 07:14	1
	82.3									

Lab Sample ID: LCS 160-259558/2-A
Matrix: Water
Analysis Batch: 262648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259558

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.2	13.90		1.52	1.00	0.316	pCi/L	125	68 - 137		

QC Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

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

Lab Sample ID: LCS 160-259558/2-A
Matrix: Water
Analysis Batch: 262648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259558

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	65.8		40 - 110

Lab Sample ID: 400-123939-A-1-B DU
Matrix: Water
Analysis Batch: 262648

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 259558

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	-0.0644	U	0.02800	U	0.0943	1.00	0.175	pCi/L	0.56	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	92.9		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-259399/1-A
Matrix: Water
Analysis Batch: 261836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259399

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1452	U	0.347	0.348	1.00	0.596	pCi/L	07/06/16 14:36	07/25/16 13:36	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110	07/06/16 14:36	07/25/16 13:36	1
Y Carrier	87.5		40 - 110	07/06/16 14:36	07/25/16 13:36	1

Lab Sample ID: LCS 160-259399/2-A
Matrix: Water
Analysis Batch: 261836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259399

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	19.8	24.49		2.56	1.00	0.513	pCi/L	124	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	93.7		40 - 110
Y Carrier	87.9		40 - 110

Lab Sample ID: LCSD 160-259399/3-A
Matrix: Water
Analysis Batch: 261836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 259399

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	19.8	23.89		2.51	1.00	0.515	pCi/L	121	56 - 140	0.12	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

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

Lab Sample ID: LCSD 160-259399/3-A
Matrix: Water
Analysis Batch: 261836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 259399

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	93.4		40 - 110
Y Carrier	88.2		40 - 110

Lab Sample ID: MB 160-259562/1-A
Matrix: Water
Analysis Batch: 262450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259562

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2753	U	0.258	0.259	1.00	0.415	pCi/L	07/07/16 11:25	07/28/16 13:03	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110	07/07/16 11:25	07/28/16 13:03	1
Y Carrier	84.5		40 - 110	07/07/16 11:25	07/28/16 13:03	1

Lab Sample ID: LCS 160-259562/2-A
Matrix: Water
Analysis Batch: 262450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259562

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.8	15.67		1.79	1.00	0.524	pCi/L	106	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	65.8		40 - 110
Y Carrier	81.5		40 - 110

Lab Sample ID: 400-123939-A-1-D DU
Matrix: Water
Analysis Batch: 262450

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 259562


Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.0883	U	-0.07249	U	0.231	1.00	0.424	pCi/L	0.36	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	92.9		40 - 110
Y Carrier	87.5		40 - 110

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

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: Jason Roush		Lab P#: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-56525-24537.1	
Client Contact: Sarah Copeland		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1 of 3		Job #: 400-123621	
Company: Alabama Power General Test Laboratory		Due Date Requested:		 400-123621 COC		Total Number of Containers		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Address: 744 County Rd 87 GSC #8		TAT Requested (days): Routine							
City: Calera		PO #:							
State, Zip: AL, 35040		WO #:							
Phone: 205-864-6121 (Tel)		Project #:		9316_Ra226_9320_Ra228_Ra228a228_GFPc		Field Filtered Sample (Yes or No)		Perform MSD (Yes or No)	
Email: sgopelia@southernco.com		CCR		40007143		D		Special Instructions/Note:	
Site: Gorgas Landfill (2)		SSOW#:							
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=Air)	Preservation Code			
AW15618		6/20/16	1205	G	Water		MW-1		
AW15619		6/20/16	1343	G	Water		MW-2		
AW15620		6/20/16	1343	G	Water		MW-2 Dup (Sample Duplicated)		
AW15621		6/20/16	1715	G	Water		MW-4		
AW15622		6/21/16	1035	G	Water		MW-8		
AW15623		6/21/16	1153	G	Water		MW-7		
AW15624		6/21/16	1330	G	Water		MW-6		
AW15625		6/21/16	1355	G	Water		FB-1 (Field Blank)		
AW15626		6/21/16	1525	G	Water		MW-5		
AW15627		6/22/16	0915	G	Water		MW-16		
AW15628		6/22/16	1035	G	Water		MW-18		
Possible Hazard Identification <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		Date: 6/27/16, 1415		Company: APC		Received by: <i>[Signature]</i>		Date/Time: 6/28/16 15:45	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: Sarah Copeland		Date/Time: 6/27/16, 1415		Relinquished by: <i>[Signature]</i>		Date/Time: 6/28/16 15:45	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Relinquished by: <i>[Signature]</i>		Date/Time: 6/28/16 15:45		Company: TA	



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

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: Nick Pitts	Lab POC: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-56625-24537.1			
Client Contact: Sarah Copeland		Phone:	E-Mail: cheyenne.whitmire@testamericainc.com	Page: 2 of 3	Job #:			
Company: Alabama Power General Test Laboratory		Due Date Requested:	Analysis Requested					
Address: 744 County Rd 87 GSC #8		TAT Requested (days):	Total Number of Containers:					
City: Calera		PO #:	Preservation Codes:					
State, Zip: AL, 35040		WO #:	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:					
Phone: 205-664-6121 (Tel)		Project #:	M - Hexane N - None O - AsNaCl2 P - Na2O4S Q - Na2SO3 R - Na2SZD3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)					
Email: sgcopela@southernco.com		CCR	Special Instructions/Note:					
Site: Gorgas Landfill (2)		SSOW#:	MW-9 MW-13 MW-14 EB-1 (Equipment Blank) MW-15 MW-3 MW-12					
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Performance/MSD (Yes or No)	Preservation Code	Special Instructions/Note
AW15629	6/20/16	1638	G	Water	X	X	D	
AW15630	6/22/16	0850	G	Water	X	X		
AW15631	6/22/16	0945	G	Water	X	X		
AW15632	6/22/16	1010	G	Water	X	X		
AW15672	6/22/16	1048	G	Water	X	X		
AW15673	6/22/16	1310	G	Water	X	X		
AW15674	6/22/16	1632	G	Water	X	X		
Possible Hazard Identification <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:								
Relinquished by: Sarah Copeland			Date/Time: 6/27/16; 1415			Company: APC		
Relinquished by: <i>[Signature]</i>			Date/Time: 6/28/16 1545			Company: APC		
Relinquished by:			Date/Time:			Company:		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No			Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:		



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

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: Jason Rouss		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-56525-24537-1	
Client Contact: Sarah Copeland		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 3 of 3		Job #:	
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: sgcopella@southernmco.com		Project Name: CCR		Project #: 40007143		SSOW#:		Site: Gorgas Landfill (2)	
Due Date Requested:		TAT Requested (days):		Routine		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code	
AW15718	6/22/16	1210	G	Water					
AW15719	6/22/16	1217	G	Water					
AW15720	6/22/16	1330	G	Water					
AW15721	6/22/16	1330	G	Water					
AW15722	6/22/16	1515	G	Water					
AW15723	6/23/16	1305	G	Water					
AW15724	6/23/16	1325	G	Water					
Possible Hazard Identification		<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		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	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Relinquished by: Sarah Copeland		Date/Time: 6/27/16, 1415		Method of Shipment:	
Relinquished by: [Signature]		Date/Time: 6/28/16 15:45		Company: APC		Relinquished by: [Signature]		Date/Time: 6/28/16 15:45	
Relinquished by: [Signature]		Date/Time: 6/28/16 15:45		Company: APC		Relinquished by: [Signature]		Date/Time: 6/28/16 15:45	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Total Number of Containers		Preservation Codes:	
								M - Hexane N - None O - AsNa02 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-6 X - EDTA Y - other (specify)	
								Special Instructions/Note:	

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Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-123621-1
SDG Number: Gorgas Landfill (2)

Login Number: 123621

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	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 <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	



Certification Summary

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

TestAmerica Job ID: 400-123621-1
 SDG: Gorgas Landfill (2)

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-16
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16 *
Kansas	NELAP	7	E-10253	10-31-16
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-16 *
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-16
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-15-9	09-30-16
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	08-31-16

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	003757	11-30-16
Iowa	State Program	7	373	12-01-16
Kansas	NELAP	7	E-10236	07-31-16 *
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA160008	12-31-16
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542016-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 400-123621-1
SDG: Gorgas Landfill (2)

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Oklahoma	State Program	6	9997	08-31-16 *
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-16 *
Texas	NELAP	6	T104704193-15-9	07-31-17
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542015-7	07-31-16 *
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-16 *
West Virginia DEP	State Program	3	381	08-31-16 *

* Certification renewal pending - 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

 Alabama Power



Sample Group : WMWGORLF_34

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_34

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>Chloride Batch ID</u>	<u>Fluoride Batch ID</u>	<u>Sulfate Batch ID</u>	<u>Project ID</u>
AW20224	572204	572205	572206	WMWGORLF_34
AW20225	572204	572205	572206	WMWGORLF_34
AW20226	572204	572205	572206	WMWGORLF_34
AW20227	572204	572205	572206	WMWGORLF_34
AW20228	572204	572205	572206	WMWGORLF_34
AW20229	572204	572205	572206	WMWGORLF_34
AW20230	572204	572205	572206	WMWGORLF_34
AW20231	572204	572205	572206	WMWGORLF_34
AW20232	572204	572205	572206	WMWGORLF_34
AW20233	573131	573132	573133	WMWGORLF_34

4. All of the above samples were analyzed and prepared by EPA 300.0.
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 instrument performance check (IPC) was analyzed and all criteria were met.
- All laboratory reagent blanks were less than the method detection limits for the requested anions, with the following exceptions:
 1. The blank for anion sulfate in batch 572206 presented a concentration above the MDL of 0.3, at 0.415 mg/L. Sulfate in sample AW20230 was reported above the MDL but below the RL value, and is less than 10x the associated blank concentration, and should be considered as a quantitatively estimated non-detect value with indication of potential high bias on the RL value.
 2. The blank for anion sulfate in batch 573133 presented a concentration above the MDL of 0.3, at 0.318 mg/L. Sulfate in sample AW20233 was reported below the MDL value, and is reported as a non-detect value with no qualification necessary.



- All laboratory fortified blanks (LFB) were within acceptance criteria for the anions requested, with the following exception:
 1. No closing LFB was listed for the dilution re-analyses for sulfate in batch 572206. Due to absence of LFB data, the reported results for the following sample dilutions for sulfate are qualified as quantitatively estimated with indeterminate bias direction and magnitude: AW20224, AW20225, AW20226, AW20227, AW20228, AW20229, AW20231 and AW20232.
- 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 laboratory fortified matrix sample was analyzed with each batch. All acceptance criteria for accuracy were met.
- A sample duplicate and/or laboratory fortified matrix duplicate were analyzed with each batch. All acceptance criteria for precision were met. It is noted that separate and distinct criteria for duplicate precision calculations, based on sample and duplicate anion concentrations, are used to assess precision compliance. These are as follow: if the sample and duplicate are both greater than 5x anion Reporting Limit (RL) concentration, the precision is calculated and reported as relative percent difference (RPD), with an acceptance range of 0 - 20%; if either the sample or duplicate are less than 5x anion RL, the precision is calculated and reported as the absolute value of the difference between the two concentrations, with an acceptance range of less than or equal to the anion RL value.



7. Samples AW20224, AW20225, AW20226, AW20227, AW20228, AW20229, AW20231 and AW20232 were re-analyzed at a 50x dilution for sulfate, due to the undiluted results exceeding the calibrated range of the detector. The dilution results for sulfate for these samples should be used; reporting limit (RL) values are adjusted upward to reflect the dilution factor applied.

<u>Sample ID</u>		<u>Analyte</u>		<u>Dilution Factor</u>
AW20224		Sulfate		50X
AW20225		Sulfate		50X
AW20226		Sulfate		50X
AW20227		Sulfate		50X
AW20228		Sulfate		50X
AW20229		Sulfate		50X
AW20231		Sulfate		50X
AW20232		Sulfate		50X

8. The raw data results are shown with dilution factors included, when dilutions are manually performed by the analyst.
The raw data results are shown without dilution factor corrections, when dilutions are run automatically by the instrument.



Metals ICP

Gorgas Landfill

WMWGORLF_34

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>Ca Batch ID</u>	<u>B & Li Batch ID</u>	<u>Project ID</u>
AW20224	20160907B	20160829A	WMWGORLF_34
AW20225	20160907B	20160829A	WMWGORLF_34
AW20226	20160907B	20160829A	WMWGORLF_34
AW20227	20160907B	20160829A	WMWGORLF_34
AW20228	20160907B	20160829A	WMWGORLF_34
AW20229	20160907B	20160829A	WMWGORLF_34
AW20230	20160907B	20160829A	WMWGORLF_34
AW20231	20160907B	20160829A	WMWGORLF_34
AW20232	20160907B	20160829A	WMWGORLF_34
AW20233	20160907B	20160829A	WMWGORLF_34

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

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met, with the exception of Calcium. All samples were re-digested and analyzed with passing LCS.
- 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 without a dilution with the following exceptions: The following samples were diluted due to sample concentrations from the undiluted analysis were over the high standard of the calibration curve.

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AW20224	Calcium	10.15X
AW20225	Calcium	10.15X
AW20226	Calcium	10.15X
AW20227	Calcium	10.15X
AW20228	Calcium	10.15X
AW20229	Calcium	10.15X
AW20231	Calcium	10.15X
AW20232	Calcium	10.15X

8. The raw data results include both results corrected for dilution and results not corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_34

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>
AW20224	573599	WMWGORLF_34
AW20225	573599	WMWGORLF_34
AW20226	573599	WMWGORLF_34
AW20227	573599	WMWGORLF_34
AW20228	573599	WMWGORLF_34
AW20229	573599	WMWGORLF_34
AW20230	573599	WMWGORLF_34
AW20231	573599	WMWGORLF_34
AW20232	573599	WMWGORLF_34
AW20233	573599	WMWGORLF_34

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.
7. Cadmium MDL was increased from 0.0001 mg/L to 0.0002 mg/L. Sample AW20227 is now reported as Not Detected.

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.
-
8. All samples were analyzed at a dilution of 1 to 5 to compensate for any matrix effects.
 9. The raw data results are shown with dilution factors included.



Mercury

Gorgas Landfill

WMWGORLF_34

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>
AW20224	573220	WMWGORLF_34
AW20225	573220	WMWGORLF_34
AW20226	573220	WMWGORLF_34
AW20227	573220	WMWGORLF_34
AW20228	573220	WMWGORLF_34
AW20229	573221	WMWGORLF_34
AW20230	573221	WMWGORLF_34
AW20231	573221	WMWGORLF_34
AW20232	573221	WMWGORLF_34
AW20233	573221	WMWGORLF_34

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_34

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>
AW20224	572595	WMWGORLF_34
AW20225	572595	WMWGORLF_34
AW20226	572595	WMWGORLF_34
AW20227	572595	WMWGORLF_34
AW20228	572595	WMWGORLF_34
AW20229	572595	WMWGORLF_34
AW20230	572595	WMWGORLF_34
AW20231	572595	WMWGORLF_34
AW20232	572595	WMWGORLF_34
AW20233	572595	WMWGORLF_34

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.
7. TDS reporting limit was incorrectly listed as 2.5mg/L. It has been updated based on filter volume and project limits.

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 0.5 mg 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 2.5 mg and 200 mg residue with the exception of AW20230 which was <2.5mg.

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 08-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW20224

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	J 0.00991	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	J 0.0278	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		10.15	1.0	5.0	150	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	0.00206	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.0513	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	J 0.0229	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	J 0.00253	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		125	2070	mg/L
* Chloride, Total	SES	8/11/2016	EPA 300.0		1	0.04	0.25	2.18	mg/L
* Fluoride, Total	SES	8/11/2016	EPA 300.0		1	0.01	0.3	J 0.137	mg/L
* Sulfate, Total	SES	8/12/2016	EPA 300.0		50	15.0	50	1460	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 08-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW20224

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20228 Mercury, Total by CVAA	mg/L	0.000113	0.0005	0.004	0.00402	0.00398	0.00393	0.0034 to 0.0046	100	70 to 130	0.967	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 08-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW20224

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Limit	Rec	Prec	Prec	Limit
								Duplicate	LFB		Rec	Limit	Prec	Limit
AW19678	Fluoride, Total	mg/L	0.000	0.3		2.00	2.10	0.129	1.99	1.8 to 2.2	98.5	80 to 120	0.772	20
AW19678	Chloride, Total	mg/L	0.000	0.25		10.00	13.1	3.16	9.93	9 to 11	99.4	80 to 120	0.00	20
AW19678	Sulfate, Total	mg/L	0.415	1.0		20.00	24.0	4.33	19.7	18 to 22	98.0	80 to 120	1.60	20
AW20224	Solids, Dissolved	mg/L	2.0	25				2095	53	40 to 60			0.600	5

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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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 08-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW20225

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.0162	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	J 0.0340	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		10.15	1.0	5.0	180	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.103	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	0.0627	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		250	1740	mg/L
* Chloride, Total	SES	8/11/2016	EPA 300.0		1	0.04	0.25	3.31	mg/L
* Fluoride, Total	SES	8/11/2016	EPA 300.0		1	0.01	0.3	J 0.134	mg/L
* Sulfate, Total	SES	8/12/2016	EPA 300.0		50	15.0	50	1100	mg/L

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Expiration: June 30, 2017

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 08-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW20225

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	
AW20228 Mercury, Total by CVAA	mg/L	0.000113	0.0005	0.004	0.00402	0.00398	0.00393	0.0034 to 0.0046	100	70 to 130	0.967	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 08-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW20225

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW19678	Fluoride, Total	mg/L	0.000	0.3	2.00	2.10	0.129	1.99	1.8 to 2.2	98.5	80 to 120	0.772	20
AW19678	Chloride, Total	mg/L	0.000	0.25	10.00	13.1	3.16	9.93	9 to 11	99.4	80 to 120	0.00	20
AW19678	Sulfate, Total	mg/L	0.415	1.0	20.00	24.0	4.33	19.7	18 to 22	98.0	80 to 120	1.60	20
AW20224	Solids, Dissolved	mg/L	2.0	25			2095	53	40 to 60			0.600	5

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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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW20226

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	J 0.00889	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	0.00331	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	J 0.0429	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		10.15	1.0	5.0	260	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	0.00122	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.311	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	0.122	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		250	3050	mg/L
* Chloride, Total	SES	8/11/2016	EPA 300.0		1	0.04	0.25	1.35	mg/L
* Fluoride, Total	SES	8/11/2016	EPA 300.0		1	0.01	0.3	0.363	mg/L
* Sulfate, Total	SES	8/11/2016	EPA 300.0		50	15.0	50	2050	mg/L

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To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW20226

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	
AW20228 Mercury, Total by CVAA	mg/L	0.000113	0.0005	0.004	0.00402	0.00398	0.00393	0.0034 to 0.0046	100	70 to 130	0.967	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW20226

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW19678	Fluoride, Total	mg/L	0.000	0.3	2.00	2.10	0.129	1.99	1.8 to 2.2	98.5	80 to 120	0.772	20
AW19678	Chloride, Total	mg/L	0.000	0.25	10.00	13.1	3.16	9.93	9 to 11	99.4	80 to 120	0.00	20
AW19678	Sulfate, Total	mg/L	0.415	1.0	20.00	24.0	4.33	19.7	18 to 22	98.0	80 to 120	1.60	20
AW20224	Solids, Dissolved	mg/L	2.0	25			2095	53	40 to 60			0.600	5

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW20227

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.0119	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	J 0.0453	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		10.15	1.0	5.0	318	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	J 0.0452	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		250	4140	mg/L
* Chloride, Total	SES	8/11/2016	EPA 300.0		1	0.04	0.25	1.95	mg/L
* Fluoride, Total	SES	8/11/2016	EPA 300.0		1	0.01	0.3	0.326	mg/L
* Sulfate, Total	SES	8/11/2016	EPA 300.0		50	15.0	50	2750	mg/L

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002.
 The result for Cd has been correctly changed to Not Detected. SGC 3/20/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW20227

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20228 Mercury, Total by CVAA	mg/L	0.000113	0.0005	0.004	0.00402	0.00398	0.00393	0.0034 to 0.0046	100	70 to 130	0.967	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002.
 The result for Cd has been correctly changed to Not Detected. SGC 3/20/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW20227

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample		LFB Limit	Rec		Prec Limit	
							Duplicate	LFB		Rec Limit	Prec		
AW19678	Fluoride, Total	mg/L	0.000	0.3	2.00	2.10	0.129	1.99	1.8 to 2.2	98.5	80 to 120	0.772	20
AW19678	Chloride, Total	mg/L	0.000	0.25	10.00	13.1	3.16	9.93	9 to 11	99.4	80 to 120	0.00	20
AW19678	Sulfate, Total	mg/L	0.415	1.0	20.00	24.0	4.33	19.7	18 to 22	98.0	80 to 120	1.60	20
AW20224	Solids, Dissolved	mg/L	2.0	25			2095	53	40 to 60			0.600	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

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-4 Dup

Laboratory ID Number: AW20228

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.0118	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	J 0.0452	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		10.15	1.0	5.0	325	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	J 0.0456	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		250	4130	mg/L
* Chloride, Total	SES	8/11/2016	EPA 300.0		1	0.04	0.25	1.97	mg/L
* Fluoride, Total	SES	8/11/2016	EPA 300.0		1	0.01	0.3	0.330	mg/L
* Sulfate, Total	SES	8/11/2016	EPA 300.0		50	15.0	50	2700	mg/L

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 FAX (205) 257-1654

Batch QC Summary



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-4 Dup

Laboratory ID Number: AW20228

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	
AW20228 Mercury, Total by CVAA	mg/L	0.000113	0.0005	0.004	0.00402	0.00398	0.00393	0.0034 to 0.0046	100	70 to 130	0.967	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-4 Dup

Laboratory ID Number: AW20228

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW19678	Fluoride, Total	mg/L	0.000	0.3	2.00	2.10	0.129	1.99	1.8 to 2.2	98.5	80 to 120	0.772	20
AW19678	Chloride, Total	mg/L	0.000	0.25	10.00	13.1	3.16	9.93	9 to 11	99.4	80 to 120	0.00	20
AW19678	Sulfate, Total	mg/L	0.415	1.0	20.00	24.0	4.33	19.7	18 to 22	98.0	80 to 120	1.60	20
AW20224	Solids, Dissolved	mg/L	2.0	25			2095	53	40 to 60			0.600	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

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**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW20229

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	J 0.00210	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.0120	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	J 0.0964	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		10.15	1.0	5.0	399	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	0.204	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		250	2860	mg/L
* Chloride, Total	SES	8/11/2016	EPA 300.0		1	0.04	0.25	2.19	mg/L
* Fluoride, Total	SES	8/11/2016	EPA 300.0		1	0.01	0.3	J 0.092	mg/L
* Sulfate, Total	SES	8/11/2016	EPA 300.0		50	15.0	50	1740	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW20229

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20852 Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00408	0.00400	0.00403	0.0034 to 0.0046	102	70 to 130	1.96	20	

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 John Pugh

Customer Account: WMWGORLF
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW20229

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW19678	Fluoride, Total	mg/L	0.000	0.3	2.00	2.10	0.129	1.99	1.8 to 2.2	98.5	80 to 120	0.772	20
AW19678	Chloride, Total	mg/L	0.000	0.25	10.00	13.1	3.16	9.93	9 to 11	99.4	80 to 120	0.00	20
AW19678	Sulfate, Total	mg/L	0.415	1.0	20.00	24.0	4.33	19.7	18 to 22	98.0	80 to 120	1.60	20
AW20224	Solids, Dissolved	mg/L	2.0	25			2095	53	40 to 60			0.600	5

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 Calera, AL 35040
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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW20230

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		1.015	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	8/12/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	8/12/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	8/12/2016	EPA 300.0		1	0.3	1	J 0.419	mg/L

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Batch QC Summary



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW20230

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20852 Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00408	0.00400	0.00403	0.0034 to 0.0046	102	70 to 130	1.96	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 09-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW20230

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW19678	Fluoride, Total	mg/L	0.000	0.3	2.00	2.10	0.129	1.99	1.8 to 2.2	98.5	80 to 120	0.772	20
AW19678	Chloride, Total	mg/L	0.000	0.25	10.00	13.1	3.16	9.93	9 to 11	99.4	80 to 120	0.00	20
AW19678	Sulfate, Total	mg/L	0.415	1.0	20.00	24.0	4.33	19.7	18 to 22	98.0	80 to 120	1.60	20
AW20224	Solids, Dissolved	mg/L	2.0	25			2095	53	40 to 60			0.600	5

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 Calera, AL 35040
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 FAX (205) 257-1654

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 10-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW20231

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.0186	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	0.216	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		10.15	1.0	5.0	245	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	J 0.00438	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	0.231	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		125	1660	mg/L
* Chloride, Total	SES	8/11/2016	EPA 300.0		1	0.04	0.25	1.55	mg/L
* Fluoride, Total	SES	8/11/2016	EPA 300.0		1	0.01	0.3	J 0.123	mg/L
* Sulfate, Total	SES	8/12/2016	EPA 300.0		50	15.0	50	992	mg/L

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 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW20231

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20852 Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00408	0.00400	0.00403	0.0034 to 0.0046	102	70 to 130	1.96	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	

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 John Pugh

Customer Account: WMWGORLF
 Sample Date: 10-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW20231

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW19678	Fluoride, Total	mg/L	0.000	0.3	2.00	2.10	0.129	1.99	1.8 to 2.2	98.5	80 to 120	0.772	20
AW19678	Chloride, Total	mg/L	0.000	0.25	10.00	13.1	3.16	9.93	9 to 11	99.4	80 to 120	0.00	20
AW19678	Sulfate, Total	mg/L	0.415	1.0	20.00	24.0	4.33	19.7	18 to 22	98.0	80 to 120	1.60	20
AW20224	Solids, Dissolved	mg/L	2.0	25			2095	53	40 to 60			0.600	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

CC:

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

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 10-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW20232

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	0.0416	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.0125	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	0.197	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		10.15	1.0	5.0	348	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	0.0565	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	0.0805	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		250	3710	mg/L
* Chloride, Total	SES	8/11/2016	EPA 300.0		1	0.04	0.25	4.15	mg/L
* Fluoride, Total	SES	8/11/2016	EPA 300.0		1	0.01	0.3	J 0.127	mg/L
* Sulfate, Total	SES	8/12/2016	EPA 300.0		50	15.0	50	2300	mg/L

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Batch QC Summary



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 10-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW20232

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20852 Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00408	0.00400	0.00403	0.0034 to 0.0046	102	70 to 130	1.96	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	

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Batch QC Summary



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 10-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW20232

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	LFB	Limit	Rec	Prec	Prec	Limit
								Duplicate	LFB			Rec	Limit	Prec	Limit
AW19678	Fluoride, Total	mg/L	0.000	0.3	2.00	2.10		0.129	1.99		1.8 to 2.2	98.5	80 to 120	0.772	20
AW19678	Chloride, Total	mg/L	0.000	0.25	10.00	13.1		3.16	9.93		9 to 11	99.4	80 to 120	0.00	20
AW19678	Sulfate, Total	mg/L	0.415	1.0	20.00	24.0		4.33	19.7		18 to 22	98.0	80 to 120	1.60	20
AW20224	Solids, Dissolved	mg/L	2.0	25				2095	53		40 to 60			0.600	5

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 Calera, AL 35040
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 FAX (205) 257-1654

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 10-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW20233

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	11/28/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Arsenic, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	HRG	8/29/2016	EPA 200.7		1.015	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	9/7/2016	EPA 200.7		1.015	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
* Cobalt, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	8/22/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	8/29/2016	EPA 200.7		1.015	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	JHK	8/25/2016	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	8/25/2016	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	8/16/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	8/18/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	8/18/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	8/18/2016	EPA 300.0		1	0.3	1	U Not Detected	mg/L

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 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 10-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW20233

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW20233 Cobalt, Total	mg/L	-0.00000861	0.0044	0.10	0.108	0.108	0.107	0.085 to 0.115	108	70 to 130	0.0199	20	
AW20233 Barium, Total	mg/L	0.0000135	0.0044	0.10	0.1000	0.101	0.101	0.085 to 0.115	100	70 to 130	1.49	20	
AW20233 Selenium, Total	mg/L	0.0000527	0.0044	0.10	0.0989	0.0987	0.104	0.085 to 0.115	98.9	70 to 130	0.183	20	
AW20233 Lithium, Total	mg/L	0.000148	0.022	0.20	0.195	0.187	0.187	0.17 to 0.23	97.4	70 to 130	4.19	20	
AW20852 Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00408	0.00400	0.00403	0.0034 to 0.0046	102	70 to 130	1.96	20	
AW20233 Arsenic, Total	mg/L	0.0000156	0.0022	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.396	20	
AW20233 Boron, Total	mg/L	0.00344	0.044	1.00	1.09	1.02	1.08	0.85 to 1.15	109	70 to 130	7.25	20	
AW20233 Cadmium, Total	mg/L	0.00000235	0.00044	0.10	0.106	0.104	0.104	0.085 to 0.115	106	70 to 130	2.31	20	
AW20233 Antimony, Total	mg/L	0.0000773	0.00132	0.10	0.0975	0.0985	0.0963	0.085 to 0.115	97.5	70 to 130	1.05	20	
AW20233 Lead, Total	mg/L	0.00000634	0.0022	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.107	20	
AW20233 Molybdenum, Total	mg/L	0.00000775	0.0044	0.10	0.0995	0.100	0.0983	0.085 to 0.115	99.5	70 to 130	0.701	20	
AW20233 Beryllium, Total	mg/L	0.00000478	0.00132	0.10	0.102	0.103	0.101	0.085 to 0.115	102	70 to 130	0.799	20	
AW20233 Calcium, Total	mg/L	-0.0160	0.22	5.00	5.35	5.23	5.04	4.25 to 5.75	107	70 to 130	6.60	20	
AW20233 Chromium, Total	mg/L	0.00000896	0.0044	0.10	0.105	0.105	0.106	0.085 to 0.115	105	70 to 130	0.187	20	
AW20233 Thallium, Total	mg/L	0.00000316	0.00044	0.10	0.103	0.104	0.103	0.085 to 0.115	103	70 to 130	0.277	20	

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To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 10-Aug-16
 Customer ID:
 Delivery Date: 11-Aug-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW20233

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW20857	Sulfate, Total	mg/L	0.318	1.0	200	474	273	19.7	18 to 22	99.5	80 to 120	0.730	20
AW20857	Chloride, Total	mg/L	0.00	0.25	10.00	24.3	14.7	9.91	9 to 11	96.0	80 to 120	0.00	20
AW20224	Solids, Dissolved	mg/L	2.0	25			2095	53	40 to 60			0.600	5
AW20857	Fluoride, Total	mg/L	0.00	0.3	2.00	2.11	0.105	2.00	1.8 to 2.2	100	80 to 120	0.00	20

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CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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

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: 400-126077-1

TestAmerica Sample Delivery Group: Gorgas Landfill (3)

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:

9/22/2016 4:45:14 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Method Summary

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

TestAmerica Job ID: 400-126077-1
SDG: Gorgas Landfill (3)

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: 400-126077-1
SDG: Gorgas Landfill (3)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-126077-1	AW20224 MW-1	Water	08/08/16 14:28	08/19/16 15:30
400-126077-2	AW20225 MW-2	Water	08/08/16 15:45	08/19/16 15:30
400-126077-3	AW20226 MW-3	Water	08/09/16 10:35	08/19/16 15:30
400-126077-4	AW20227 MW-4	Water	08/09/16 11:50	08/19/16 15:30
400-126077-5	AW20228 MW-4 DUP	Water	08/09/16 11:50	08/19/16 15:30
400-126077-6	AW20229 MW-11	Water	08/09/16 11:13	08/19/16 15:30
400-126077-7	AW20230 FB-1	Water	08/09/16 13:20	08/19/16 15:30
400-126077-8	AW20231 MW-10	Water	08/10/16 10:30	08/19/16 15:30
400-126077-9	AW20232 MW-12	Water	08/10/16 13:45	08/19/16 15:30
400-126077-10	AW20233 EB-1	Water	08/10/16 14:15	08/19/16 15:30

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20224 MW-1

Lab Sample ID: 400-126077-1

Date Collected: 08/08/16 14:28

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.171		0.0817	0.0831	1.00	0.0983	pCi/L	08/30/16 15:08	09/21/16 07:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					08/30/16 15:08	09/21/16 07:23	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.340	U	0.351	0.353	1.00	0.572	pCi/L	08/30/16 15:43	09/14/16 16:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					08/30/16 15:43	09/14/16 16:40	1
Y Carrier	85.6		40 - 110					08/30/16 15:43	09/14/16 16:40	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.511	U	0.361	0.362	5.00	0.572	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20225 MW-2

Lab Sample ID: 400-126077-2

Date Collected: 08/08/16 15:45

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.110		0.0720	0.0727	1.00	0.101	pCi/L	08/30/16 15:08	09/21/16 07:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					08/30/16 15:08	09/21/16 07:23	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.121	U	0.310	0.310	1.00	0.537	pCi/L	08/30/16 15:43	09/14/16 16:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					08/30/16 15:43	09/14/16 16:41	1
Y Carrier	87.1		40 - 110					08/30/16 15:43	09/14/16 16:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.231	U	0.318	0.319	5.00	0.537	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20226 MW-3

Lab Sample ID: 400-126077-3

Date Collected: 08/09/16 10:35

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.170		0.0881	0.0894	1.00	0.120	pCi/L	08/30/16 15:08	09/21/16 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					08/30/16 15:08	09/21/16 11:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.208	U	0.311	0.311	1.00	0.522	pCi/L	08/30/16 15:43	09/14/16 16:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					08/30/16 15:43	09/14/16 16:41	1
Y Carrier	89.3		40 - 110					08/30/16 15:43	09/14/16 16:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.378	U	0.323	0.324	5.00	0.522	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20227 MW-4

Lab Sample ID: 400-126077-4

Date Collected: 08/09/16 11:50

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.129		0.0858	0.0865	1.00	0.126	pCi/L	08/30/16 15:08	09/21/16 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/30/16 15:08	09/21/16 11:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.387	U	0.333	0.335	1.00	0.532	pCi/L	08/30/16 15:43	09/14/16 16:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/30/16 15:43	09/14/16 16:41	1
Y Carrier	84.9		40 - 110					08/30/16 15:43	09/14/16 16:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.516	U	0.344	0.346	5.00	0.532	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20228 MW-4 DUP

Lab Sample ID: 400-126077-5

Date Collected: 08/09/16 11:50

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.161		0.0944	0.0955	1.00	0.132	pCi/L	08/30/16 15:08	09/21/16 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.9		40 - 110					08/30/16 15:08	09/21/16 11:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.293	U	0.364	0.365	1.00	0.603	pCi/L	08/30/16 15:43	09/14/16 16:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.9		40 - 110					08/30/16 15:43	09/14/16 16:41	1
Y Carrier	90.8		40 - 110					08/30/16 15:43	09/14/16 16:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.454	U	0.376	0.377	5.00	0.603	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20229 MW-11

Lab Sample ID: 400-126077-6

Date Collected: 08/09/16 11:13

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.223		0.101	0.103	1.00	0.131	pCi/L	08/30/16 15:08	09/21/16 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					08/30/16 15:08	09/21/16 11:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.356	U	0.305	0.307	1.00	0.484	pCi/L	08/30/16 15:43	09/14/16 16:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					08/30/16 15:43	09/14/16 16:41	1
Y Carrier	86.0		40 - 110					08/30/16 15:43	09/14/16 16:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.579		0.321	0.324	5.00	0.484	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20230 FB-1

Lab Sample ID: 400-126077-7

Date Collected: 08/09/16 13:20

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0276	U	0.0577	0.0578	1.00	0.103	pCi/L	08/30/16 15:08	09/21/16 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					08/30/16 15:08	09/21/16 11:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.282	U	0.302	0.303	1.00	0.493	pCi/L	08/30/16 15:43	09/14/16 16:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					08/30/16 15:43	09/14/16 16:41	1
Y Carrier	86.7		40 - 110					08/30/16 15:43	09/14/16 16:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.310	U	0.307	0.308	5.00	0.493	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20231 MW-10

Lab Sample ID: 400-126077-8

Date Collected: 08/10/16 10:30

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.138		0.0826	0.0835	1.00	0.115	pCi/L	08/30/16 15:08	09/21/16 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/30/16 15:08	09/21/16 11:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.230	U	0.345	0.346	1.00	0.580	pCi/L	08/30/16 15:43	09/14/16 16:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/30/16 15:43	09/14/16 16:42	1
Y Carrier	84.1		40 - 110					08/30/16 15:43	09/14/16 16:42	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	0.368	U	0.355	0.356	5.00	0.580	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20232 MW-12

Lab Sample ID: 400-126077-9

Date Collected: 08/10/16 13:45

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.236		0.0936	0.0960	1.00	0.107	pCi/L	08/30/16 15:08	09/21/16 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					08/30/16 15:08	09/21/16 11:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.798		0.411	0.417	1.00	0.614	pCi/L	08/30/16 15:43	09/14/16 16:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					08/30/16 15:43	09/14/16 16:42	1
Y Carrier	83.0		40 - 110					08/30/16 15:43	09/14/16 16:42	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	1.03		0.421	0.428	5.00	0.614	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20233 EB-1

Lab Sample ID: 400-126077-10

Date Collected: 08/10/16 14:15

Matrix: Water

Date Received: 08/19/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0458	U	0.0600	0.0601	1.00	0.100	pCi/L	08/30/16 15:08	09/21/16 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					08/30/16 15:08	09/21/16 11:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.283	U	0.329	0.330	1.00	0.542	pCi/L	08/30/16 15:43	09/14/16 16:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					08/30/16 15:43	09/14/16 16:42	1
Y Carrier	86.7		40 - 110					08/30/16 15:43	09/14/16 16:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.329	U	0.335	0.336	5.00	0.542	pCi/L		09/21/16 18:23	1

Definitions/Glossary

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

TestAmerica Job ID: 400-126077-1
SDG: Gorgas Landfill (3)

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20224 MW-1

Lab Sample ID: 400-126077-1

Date Collected: 08/08/16 14:28

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 07:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269644	09/14/16 16:40	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: AW20225 MW-2

Lab Sample ID: 400-126077-2

Date Collected: 08/08/16 15:45

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 07:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269644	09/14/16 16:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: AW20226 MW-3

Lab Sample ID: 400-126077-3

Date Collected: 08/09/16 10:35

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 11:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269644	09/14/16 16:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: AW20227 MW-4

Lab Sample ID: 400-126077-4

Date Collected: 08/09/16 11:50

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 11:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269644	09/14/16 16:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Client Sample ID: AW20228 MW-4 DUP

Lab Sample ID: 400-126077-5

Date Collected: 08/09/16 11:50

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 11:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269644	09/14/16 16:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: AW20229 MW-11

Lab Sample ID: 400-126077-6

Date Collected: 08/09/16 11:13

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 11:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269644	09/14/16 16:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: AW20230 FB-1

Lab Sample ID: 400-126077-7

Date Collected: 08/09/16 13:20

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 11:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269644	09/14/16 16:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: AW20231 MW-10

Lab Sample ID: 400-126077-8

Date Collected: 08/10/16 10:30

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 11:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269645	09/14/16 16:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-126077-1
SDG: Gorgas Landfill (3)

Client Sample ID: AW20232 MW-12

Lab Sample ID: 400-126077-9

Date Collected: 08/10/16 13:45

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 11:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269645	09/14/16 16:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: AW20233 EB-1

Lab Sample ID: 400-126077-10

Date Collected: 08/10/16 14:15

Matrix: Water

Date Received: 08/19/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			267377	08/30/16 15:08	MCJ	TAL SL
Total/NA	Analysis	9315		1	270875	09/21/16 11:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			267380	08/30/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9320		1	269645	09/14/16 16:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	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: 400-126077-1
SDG: Gorgas Landfill (3)

Rad

Prep Batch: 267377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126077-1	AW20224 MW-1	Total/NA	Water	PrecSep-21	
400-126077-2	AW20225 MW-2	Total/NA	Water	PrecSep-21	
400-126077-3	AW20226 MW-3	Total/NA	Water	PrecSep-21	
400-126077-4	AW20227 MW-4	Total/NA	Water	PrecSep-21	
400-126077-5	AW20228 MW-4 DUP	Total/NA	Water	PrecSep-21	
400-126077-6	AW20229 MW-11	Total/NA	Water	PrecSep-21	
400-126077-7	AW20230 FB-1	Total/NA	Water	PrecSep-21	
400-126077-8	AW20231 MW-10	Total/NA	Water	PrecSep-21	
400-126077-9	AW20232 MW-12	Total/NA	Water	PrecSep-21	
400-126077-10	AW20233 EB-1	Total/NA	Water	PrecSep-21	
MB 160-267377/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-267377/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-126077-2 DU	AW20225 MW-2	Total/NA	Water	PrecSep-21	

Prep Batch: 267380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126077-1	AW20224 MW-1	Total/NA	Water	PrecSep_0	
400-126077-2	AW20225 MW-2	Total/NA	Water	PrecSep_0	
400-126077-3	AW20226 MW-3	Total/NA	Water	PrecSep_0	
400-126077-4	AW20227 MW-4	Total/NA	Water	PrecSep_0	
400-126077-5	AW20228 MW-4 DUP	Total/NA	Water	PrecSep_0	
400-126077-6	AW20229 MW-11	Total/NA	Water	PrecSep_0	
400-126077-7	AW20230 FB-1	Total/NA	Water	PrecSep_0	
400-126077-8	AW20231 MW-10	Total/NA	Water	PrecSep_0	
400-126077-9	AW20232 MW-12	Total/NA	Water	PrecSep_0	
400-126077-10	AW20233 EB-1	Total/NA	Water	PrecSep_0	
MB 160-267380/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-267380/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-126077-2 DU	AW20225 MW-2	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-267377/1-A
Matrix: Water
Analysis Batch: 270875

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 267377

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.05559	U	0.0611	0.0613	1.00	0.0994	pCi/L	08/30/16 15:08	09/21/16 07:21	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		40 - 110						
	83.8					08/30/16 15:08	09/21/16 07:21	1		

Lab Sample ID: LCS 160-267377/2-A
Matrix: Water
Analysis Batch: 270875

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 267377

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.2	15.16		1.47	1.00	0.0821	pCi/L	136	68 - 137
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	%Yield	Qualifier		40 - 110					
	84.9								

Lab Sample ID: 400-126077-2 DU
Matrix: Water
Analysis Batch: 270875

Client Sample ID: AW20225 MW-2
Prep Type: Total/NA
Prep Batch: 267377

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.110		0.1860		0.0865	1.00	0.102	pCi/L	0.48	1
Carrier	DU DU		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		40 - 110						
	87.2									

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-267380/1-A
Matrix: Water
Analysis Batch: 269644

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 267380

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1234	U	0.236	0.236	1.00	0.404	pCi/L	08/30/16 15:43	09/14/16 16:40	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		40 - 110						
	83.8					08/30/16 15:43	09/14/16 16:40	1		
Y Carrier	%Yield	Qualifier	40 - 110							
	84.5					08/30/16 15:43	09/14/16 16:40	1		

QC Sample Results

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

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

Lab Sample ID: LCS 160-267380/2-A
Matrix: Water
Analysis Batch: 269644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 267380

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.6	17.82		1.91	1.00	0.402	pCi/L	122	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	84.9		40 - 110
Y Carrier	82.2		40 - 110

Lab Sample ID: 400-126077-2 DU
Matrix: Water
Analysis Batch: 269644

Client Sample ID: AW20225 MW-2
Prep Type: Total/NA
Prep Batch: 267380

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.121	U	0.5539	U	0.372	1.00	0.570	pCi/L	0.63	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	87.2		40 - 110
Y Carrier	86.0		40 - 110


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

Lab Sample ID: 400-126077-2 DU
Matrix: Water
Analysis Batch: 271037

Client Sample ID: AW20225 MW-2
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	0.231	U	0.7399		0.382	5.00	0.570	pCi/L	0.73	

Chain of Custody Record

Client Information		Sampler: Jason Rouss		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-56525-24537.1	
Client Contact: Sarah Copeland		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		Page 1 of 1		Job #:	
Company: Alabama Power General Test Laboratory		Due Date Requested:		Analysis Requested		Total Number of Containers		Preservation Codes:	
Address: 744 County Rd 87 GSC #8		TAT Requested (days): Routine		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)		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:	
City: Calera		PO #:		8916_Ra226_9320_Ra228_Ra226Ra228_GFPCC		D		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
State, Zip: AL, 35040		WO #:		8916_Ra226_9320_Ra228_Ra226Ra228_GFPCC		D		Special Instructions/Note:	
Phone: 205-664-6121(Tel)		Project #:		Field Filtered Sample (Yes or No)		D		MW-1	
Email: sgcopela@southernco.com		40007143		Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=AP)		D		MW-2	
Project Name: CCR		SSOW#:		Sample Type (C=Comp, G=grab)		D		MW-3	
Site: Gorgas Landfill (3)		Sample Date		Sample Time		D		MW-4	
Sample Identification		8/8/16		1428		D		MW-4 Dup (Sample Duplicate)	
AW20224		8/8/16		1545		D		MW-11	
AW20225		8/9/16		1035		D		FB-1 (Field Blank)	
AW20226		8/9/16		1150		D		MW-10	
AW20227		8/9/16		1150		D		MW-12	
AW20228		8/10/16		1030		D		EB-1 (Equipment Blank)	
AW20229		8/10/16		1345		D			
AW20230		8/10/16		1415		D			
AW20231						D			
AW20232						D			
AW20233						D			
<p>Possible Hazard Identification <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</p> <p>Deliverable Requested: I, II, III, IV, Other (specify)</p> <p>Empty Kit Relinquished by: _____ Date: _____</p> <p>Relinquished by: Sarah Copeland Date/Time: 08/18/2016, 0915 Company: APC</p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Δ <input type="checkbox"/> No</p> <p>Custody Seal No.: _____</p>									
<p>Received by:  Date/Time: 8/19/16 Company: TA</p> <p>Received by: _____ Date/Time: _____ Company: _____</p> <p>Received by: _____ Date/Time: _____ Company: _____</p> <p>Cooler Temperature(s) °C and Other Remarks: 29.5°C IRS</p>									



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-126077-1
SDG Number: Gorgas Landfill (3)

Login Number: 126077

List Number: 1

Creator: Siddoway, Benjamin

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	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	29.5°C IR-5
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	



Certification Summary

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

TestAmerica Job ID: 400-126077-1
 SDG: Gorgas Landfill (3)

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-16 *
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16 *
Kansas	NELAP	7	E-10253	10-31-16
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	003757	11-30-16 *
Iowa	State Program	7	373	12-01-16 *
Kansas	NELAP	7	E-10236	10-31-16 *
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA160008	12-31-16
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542016-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 400-126077-1
SDG: Gorgas Landfill (3)

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-16 *
Texas	NELAP	6	T104704193-15-9	07-31-17
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-16 *

* Certification renewal pending - certification considered valid.

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_1048

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1048

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>Chloride Batch ID</u>	<u>Fluoride Batch ID</u>	<u>Sulfate Batch ID</u>	<u>Project ID</u>
AW25487	578211	578213	578215	WMWGORLF_1048
AW25488	578211	578213	578215	WMWGORLF_1048
AW25489	578211	578213	578215	WMWGORLF_1048
AW25490	578211	578213	578215	WMWGORLF_1048
AW25491	578211	578213	578215	WMWGORLF_1048
AW25492	578211	578213	578215	WMWGORLF_1048
AW25493	578211	578213	578215	WMWGORLF_1048
AW25494	578211	578213	578215	WMWGORLF_1048
AW25495	578211	578213	578215	WMWGORLF_1048
AW25496	578211	578213	578215	WMWGORLF_1048

4. All of the above samples were analyzed and prepared by EPA 300.0.
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 instrument performance check (IPC) was analyzed and all criteria were met.
- All laboratory reagent blanks were less than the method detection limits for the requested anions, with the following exception: the blank for anion sulfate presented a negative concentration greater than the absolute MDL value of 0.3, at -0.345 mg/L. Two batch samples (AW25493 and AW25494) presented negative sulfate concentrations (-0.257 and -0.295) below the absolute MDL value, and are reported as non-detects. All other batch sulfate samples are above 10x the absolute blank value; no qualification is necessary.
- All laboratory fortified blanks were within acceptance criteria for the anions requested, with the following exception: no closing LFB was listed for the dilution re-analyses for sulfate. Due to absence of LFB data, the reported results for the following sample dilutions for sulfate are qualified as quantitatively estimated with indeterminate bias direction and magnitude: AW25487, AW25488, AW25489, AW25490, AW25491, AW25492, AW25495 and AW25496.



- 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 laboratory fortified matrix (LFM) sample was analyzed with each batch. All acceptance criteria for accuracy were met. It is noted that the LFM for sulfate was diluted prior to spiking, and the diluted LFM sample was spiked at 20x normal concentration, with acceptable recovery
 - A sample duplicate and/or laboratory fortified matrix duplicate were analyzed with each batch. All acceptance criteria for precision were met. It is noted that separate and distinct criteria for duplicate precision calculations, based on sample and duplicate anion concentrations, are used to assess precision compliance. These are as follow: if the sample and duplicate are both greater than 5x anion Reporting Limit (RL) concentration, the precision is calculated and reported as relative percent difference (RPD), with an acceptance range of 0 - 20%; if either the sample or duplicate are less than 5x anion RL, the precision is calculated and reported as the absolute value of the difference between the two concentrations, with an acceptance range of less than or equal to the anion RL value.
7. Samples AW25487, AW25489 and AW25496 were re-analyzed for sulfate at a 20x dilution, samples AW25488, AW25491 and AW25492 were re-analyzed for sulfate at a 30x dilution, sample AW25495 was re-analyzed for sulfate at a 40x dilution, and sample AW25490 was re-analyzed at a 50x dilution, due to undiluted results exceeding the calibrated range of the detector. The dilution results for sulfate for these samples should be used; reporting limit (RL) values are adjusted upward to reflect the dilution factor applied.

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AW25487	Sulfate	20X
AW25488	Sulfate	30X
AW25489	Sulfate	20X
AW25490	Sulfate	50X
AW25491	Sulfate	30X
AW25492	Sulfate	30X
AW25495	Sulfate	40X
AW25496	Sulfate	20X

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

 Alabama Power



8. The raw data results are shown with dilution factors included, when dilutions are manually performed by the analyst.
The raw data results are shown without dilution factor corrections, when dilutions are run automatically by the instrument.



Metals ICP

Gorgas Landfill

WMWGORLF_1048

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AW25487	20161012E2_20161013B_20161013F	WMWGORLF_1048
AW25488	20161012E2_20161013B_20161013F	WMWGORLF_1048
AW25489	20161012E2_20161013B_20161013F	WMWGORLF_1048
AW25490	20161012G_20161013C	WMWGORLF_1048
AW25491	20161012G_20161013C	WMWGORLF_1048
AW25492	20161012G_20161013C	WMWGORLF_1048
AW25493	20161012G_20161013C	WMWGORLF_1048
AW25494	20161012G_20161013C	WMWGORLF_1048
AW25495	20161012G_20161013C	WMWGORLF_1048
AW25496	20161012G_20161013C	WMWGORLF_1048

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

General Quality Control Procedures:

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



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

Matrix Specific Quality Control Procedures:

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

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

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AW25488

The concentration of the matrix spike added was less than 30 percent of the concentration 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 without a dilution with the following exceptions: The following samples were diluted due to sample concentrations from the undiluted analysis were over the high standard of the calibration curve.

<u>Sample</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AW25487	Calcium	10X
AW25489	Calcium	10X
AW25488	Calcium	10X
AW25488MS	Calcium	10X
AW25488MSD	Calcium	10X
AW25490	Calcium	10X
AW25491	Calcium	10X
AW25492	Calcium	10X
AW25495	Calcium	10X
AW25496	Calcium	10X

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Case Narrative

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8. The raw data results include both results corrected for dilution and results not corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1048

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AW25487	578764	WMWGORLF_1048
AW25488	578764	WMWGORLF_1048
AW25489	578764	WMWGORLF_1048
AW25490	578764	WMWGORLF_1048
AW25491	578788	WMWGORLF_1048
AW25492	578788	WMWGORLF_1048
AW25493	578788	WMWGORLF_1048
AW25494	578788	WMWGORLF_1048
AW25495	578788	WMWGORLF_1048
AW25496	578788	WMWGORLF_1048

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.
7. Cadmium MDL increased from 0.0001 mg/L to 0.0002 mg/L. Sample AW25490 is now reported as Not Detected.

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.
-
8. All samples were analyzed at a dilution of 1 to 5 to compensate for any matrix effects.
 9. The raw data results are shown with dilution factors included.



Mercury

Gorgas Landfill

WMWGORLF_1048

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AW25487	579112	WMWGORLF_1048
AW25488	579112	WMWGORLF_1048
AW25489	579112	WMWGORLF_1048
AW25490	579112	WMWGORLF_1048
AW25491	579112	WMWGORLF_1048
AW25492	579112	WMWGORLF_1048
AW25493	579112	WMWGORLF_1048
AW25494	579112	WMWGORLF_1048
AW25495	579110	WMWGORLF_1048
AW25496	579110	WMWGORLF_1048

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 except for the ending CCV. Only samples AW25495 and AW25496 were affected.



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_1048

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AW25487	578345	WMWGORLF_1048
AW25488	578345	WMWGORLF_1048
AW25489	578345	WMWGORLF_1048
AW25490	578345	WMWGORLF_1048
AW25491	578344	WMWGORLF_1048
AW25492	578344	WMWGORLF_1048
AW25493	578344	WMWGORLF_1048
AW25494	578344	WMWGORLF_1048
AW25495	578344	WMWGORLF_1048
AW25496	578344	WMWGORLF_1048

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.
7. TDS reporting limit was incorrectly listed as 2.5 mg/L. It has been corrected based on filter volume and project limits.

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 0.5 mg of the previous weight, with the exception of:

<u>Sample ID</u>	<u>Milligram Difference</u>
AW25487	1.1
AW25481	1.1

Samples with a milligram difference of 1.0 mg and above will be qualified. Samples with a milligram difference of less than 1.0 mg will remain unqualified, as this amount does not significantly affect reported results.

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Calera, AL 35040
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- 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 2.5 mg and 200 mg residue with the exception of AW25493 and AW25494 which were <2.5mg.

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 03-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW25487

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.0105	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	10/12/2016	EPA 200.7		1	0.02	0.1	J 0.0307	mg/L
* Calcium, Total	HRG	10/13/2016	EPA 200.7		10	1.0	5.0	139	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8		5	0.0002	0.0010	0.00188	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.0525	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/12/2016	EPA 200.7		1	0.01	0.05	J 0.0229	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	J 0.00211	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C		1		125	2110	mg/L
* Chloride, Total	SES	10/10/2016	EPA 300.0		1	0.04	0.25	2.34	mg/L
* Fluoride, Total	SES	10/10/2016	EPA 300.0		1	0.01	0.3	J 0.103	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0		20	6.0	20	1460	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, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17
 Difference between the last two consecutive final weights for TDS resulted in 1.1 mg, which is above the required 0.5 mg limit.



Corrected Copy

To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 03-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW25487

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW25494 Mercury, Total by CVAA	mg/L	0.0000760	0.0005	0.004	0.00389	0.00394	0.00399	0.0034 to 0.0046	97.3	70 to 130	1.17	20	
AW25484 Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.103	0.105	0.0997	0.085 to 0.115	103	70 to 130	1.30	20	
AW25484 Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.121	0.121	0.107	0.085 to 0.115	109	70 to 130	0.389	20	
AW25484 Thallium, Total	mg/L	0.00000890	0.00044	0.10	0.0970	0.0993	0.0915	0.085 to 0.115	97.0	70 to 130	2.38	20	
AW25488 Boron, Total	mg/L	0.00777	0.044	1.00	0.992	1.00	0.917	0.85 to 1.15	95.2	70 to 130	0.803	20	
AW25484 Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.0915	0.0907	0.101	0.085 to 0.115	91.5	70 to 130	0.896	20	
AW25484 Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0935	0.0953	0.0940	0.085 to 0.115	93.5	70 to 130	1.95	20	
AW25484 Molybdenum, Total	mg/L	0.00000722	0.0044	0.10	0.109	0.110	0.102	0.085 to 0.115	109	70 to 130	1.24	20	
AW25484 Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0981	0.0950	0.0946	0.085 to 0.115	98.1	70 to 130	3.18	20	
AW25488 Calcium, Total	mg/L	-0.0333	0.22	5.00	250	244	4.65	4.25 to 5.75	144	70 to 130	2.43	20	
AW25488 Lithium, Total	mg/L	0.000509	0.022	0.20	0.322	0.325	0.196	0.17 to 0.23	113	70 to 130	0.927	20	
AW25484 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.101	0.100	0.103	0.085 to 0.115	101	70 to 130	0.507	20	
AW25484 Cobalt, Total	mg/L	-0.000000275	0.0044	0.10	0.0979	0.0996	0.103	0.085 to 0.115	97.9	70 to 130	1.73	20	
AW25484 Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0963	0.0925	0.0878	0.085 to 0.115	96.3	70 to 130	4.01	20	
AW25484 Cadmium, Total	mg/L	0.00000309	0.00044	0.10	0.100	0.101	0.0934	0.085 to 0.115	100	70 to 130	0.723	20	

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17
 Difference between the last two consecutive final weights for TDS resulted in 1.1 mg, which is above the required 0.5 mg limit.

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 03-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW25487

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW25487	Solids, Dissolved	mg/L	-1.0	25				2060	50.0	40 to 60			1.08	5
AW25496	Fluoride, Total	mg/L	0.00	0.3	2.00	1.98		0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20
AW25496	Chloride, Total	mg/L	0.00	0.25	10.00	11.3		1.64	9.90	9 to 11	97.2	80 to 120	3.73	20
AW25496	Sulfate, Total	mg/L	-0.345	1.0	400	1470		1010	19.9	18 to 22	115	80 to 120	0.00	20

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17
 Difference between the last two consecutive final weights for TDS resulted in 1.1 mg, which is above the required 0.5 mg limit.

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 04-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW25488

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	J 0.00984	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	J 0.00129	mg/L
* Boron, Total	HRG	10/12/2016	EPA 200.7		1	0.02	0.1	J 0.0400	mg/L
* Calcium, Total	HRG	10/13/2016	EPA 200.7		10	1.0	5.0	243	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8		5	0.0002	0.0010	J 0.000689	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.148	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/12/2016	EPA 200.7		1	0.01	0.05	0.0966	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C		1		125	2900	mg/L
* Chloride, Total	SES	10/10/2016	EPA 300.0		1	0.04	0.25	1.59	mg/L
* Fluoride, Total	SES	10/10/2016	EPA 300.0		1	0.01	0.3	J 0.266	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0		30	9.0	30	1950	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, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17
 Recovery for Calcium is out of range.
 Spike amount is less than 30% the sample amount. SGC 12/6/16

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 04-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW25488

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW25494 Mercury, Total by CVAA	mg/L	0.0000760	0.0005	0.004	0.00389	0.00394	0.00399	0.0034 to 0.0046	97.3	70 to 130	1.17	20	
AW25484 Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.103	0.105	0.0997	0.085 to 0.115	103	70 to 130	1.30	20	
AW25484 Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.121	0.121	0.107	0.085 to 0.115	109	70 to 130	0.389	20	
AW25484 Thallium, Total	mg/L	0.00000890	0.00044	0.10	0.0970	0.0993	0.0915	0.085 to 0.115	97.0	70 to 130	2.38	20	
AW25488 Boron, Total	mg/L	0.00777	0.044	1.00	0.992	1.00	0.917	0.85 to 1.15	95.2	70 to 130	0.803	20	
AW25484 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.101	0.100	0.103	0.085 to 0.115	101	70 to 130	0.507	20	
AW25484 Cobalt, Total	mg/L	-0.000000275	0.0044	0.10	0.0979	0.0996	0.103	0.085 to 0.115	97.9	70 to 130	1.73	20	
AW25484 Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0981	0.0950	0.0946	0.085 to 0.115	98.1	70 to 130	3.18	20	
AW25488 Calcium, Total	mg/L	-0.0333	0.22	5.00	250	244	4.65	4.25 to 5.75	144	70 to 130	2.43	20	
AW25488 Lithium, Total	mg/L	0.000509	0.022	0.20	0.322	0.325	0.196	0.17 to 0.23	113	70 to 130	0.927	20	
AW25484 Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0963	0.0925	0.0878	0.085 to 0.115	96.3	70 to 130	4.01	20	
AW25484 Cadmium, Total	mg/L	0.00000309	0.00044	0.10	0.100	0.101	0.0934	0.085 to 0.115	100	70 to 130	0.723	20	
AW25484 Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.0915	0.0907	0.101	0.085 to 0.115	91.5	70 to 130	0.896	20	
AW25484 Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0935	0.0953	0.0940	0.085 to 0.115	93.5	70 to 130	1.95	20	
AW25484 Molybdenum, Total	mg/L	0.00000722	0.0044	0.10	0.109	0.110	0.102	0.085 to 0.115	109	70 to 130	1.24	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, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17
 Recovery for Calcium is out of range.
 Spike amount is less than 30% the sample amount. SGC 12/6/16

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 04-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW25488

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample		LFB Limit	Rec		Prec Limit	
							Duplicate	LFB		Rec	Limit		
AW25496	Chloride, Total	mg/L	0.00	0.25	10.00	11.3	1.64	9.90	9 to 11	97.2	80 to 120	3.73	20
AW25496	Sulfate, Total	mg/L	-0.345	1.0	400	1470	1010	19.9	18 to 22	115	80 to 120	0.00	20
AW25496	Fluoride, Total	mg/L	0.00	0.3	2.00	1.98	0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20
AW25487	Solids, Dissolved	mg/L	-1.0	25			2060	50.0	40 to 60			1.08	5

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17
 Recovery for Calcium is out of range.
 Spike amount is less than 30% the sample amount. SGC 12/6/16

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 03-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW25489

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.0164	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	10/12/2016	EPA 200.7		1	0.02	0.1	J 0.0367	mg/L
* Calcium, Total	HRG	10/13/2016	EPA 200.7		10	1.0	5.0	184	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.0964	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/12/2016	EPA 200.7		1	0.01	0.05	0.0622	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C		1		100	1800	mg/L
* Chloride, Total	SES	10/10/2016	EPA 300.0		1	0.04	0.25	3.21	mg/L
* Fluoride, Total	SES	10/10/2016	EPA 300.0		1	0.01	0.3	J 0.086	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0		20	6.0	20	1140	mg/L

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17



Corrected Copy

To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 03-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW25489

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW25494 Mercury, Total by CVAA	mg/L	0.0000760	0.0005	0.004	0.00389	0.00394	0.00399	0.0034 to 0.0046		97.3	70 to 130	1.17	20
AW25484 Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.121	0.121	0.107	0.085 to 0.115		109	70 to 130	0.389	20
AW25484 Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.103	0.105	0.0997	0.085 to 0.115		103	70 to 130	1.30	20
AW25484 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.101	0.100	0.103	0.085 to 0.115		101	70 to 130	0.507	20
AW25484 Cobalt, Total	mg/L	-0.000000275	0.0044	0.10	0.0979	0.0996	0.103	0.085 to 0.115		97.9	70 to 130	1.73	20
AW25484 Thallium, Total	mg/L	0.00000890	0.00044	0.10	0.0970	0.0993	0.0915	0.085 to 0.115		97.0	70 to 130	2.38	20
AW25488 Boron, Total	mg/L	0.00777	0.044	1.00	0.992	1.00	0.917	0.85 to 1.15		95.2	70 to 130	0.803	20
AW25484 Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.0915	0.0907	0.101	0.085 to 0.115		91.5	70 to 130	0.896	20
AW25484 Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0935	0.0953	0.0940	0.085 to 0.115		93.5	70 to 130	1.95	20
AW25484 Molybdenum, Total	mg/L	0.00000722	0.0044	0.10	0.109	0.110	0.102	0.085 to 0.115		109	70 to 130	1.24	20
AW25484 Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0981	0.0950	0.0946	0.085 to 0.115		98.1	70 to 130	3.18	20
AW25488 Calcium, Total	mg/L	-0.0333	0.22	5.00	250	244	4.65	4.25 to 5.75		144	70 to 130	2.43	20
AW25488 Lithium, Total	mg/L	0.000509	0.022	0.20	0.322	0.325	0.196	0.17 to 0.23		113	70 to 130	0.927	20
AW25484 Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0963	0.0925	0.0878	0.085 to 0.115		96.3	70 to 130	4.01	20
AW25484 Cadmium, Total	mg/L	0.00000309	0.00044	0.10	0.100	0.101	0.0934	0.085 to 0.115		100	70 to 130	0.723	20

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 03-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW25489

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW25487	Solids, Dissolved	mg/L	-1.0	25				2060	50.0	40 to 60			1.08	5
AW25496	Fluoride, Total	mg/L	0.00	0.3	2.00	1.98	0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20	
AW25496	Sulfate, Total	mg/L	-0.345	1.0	400	1470	1010	19.9	18 to 22	115	80 to 120	0.00	20	
AW25496	Chloride, Total	mg/L	0.00	0.25	10.00	11.3	1.64	9.90	9 to 11	97.2	80 to 120	3.73	20	

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 03-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW25490

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.0119	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	RDA	10/25/2016	EPA 200.7		1	0.02	0.1	J 0.0511	mg/L
* Calcium, Total	RDA	10/25/2016	EPA 200.7		10	1.00	5.0	293	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	10/25/2016	EPA 200.7		1	0.01	0.05	J 0.0476	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C		1		250	4190	mg/L
* Chloride, Total	SES	10/11/2016	EPA 300.0		1	0.04	0.25	2.02	mg/L
* Fluoride, Total	SES	10/11/2016	EPA 300.0		1	0.01	0.3	J 0.287	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0		50	15.0	50	3060	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. The result for Cd has been correctly changed to Not Detected. SGC 3/20/17

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 03-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW25490

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW25484 Thallium, Total	mg/L	0.0000890	0.00044	0.10	0.0970	0.0993	0.0915	0.085 to 0.115	97.0	70 to 130	2.38	20	
AW25484 Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.121	0.121	0.107	0.085 to 0.115	109	70 to 130	0.389	20	
AW25484 Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0981	0.0950	0.0946	0.085 to 0.115	98.1	70 to 130	3.18	20	
AW25494 Mercury, Total by CVAA	mg/L	0.0000760	0.0005	0.004	0.00389	0.00394	0.00399	0.0034 to 0.0046	97.3	70 to 130	1.17	20	
AW25484 Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.103	0.105	0.0997	0.085 to 0.115	103	70 to 130	1.30	20	
AW25484 Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0963	0.0925	0.0878	0.085 to 0.115	96.3	70 to 130	4.01	20	
AW25484 Cadmium, Total	mg/L	0.00000309	0.00044	0.10	0.100	0.101	0.0934	0.085 to 0.115	100	70 to 130	0.723	20	
AW25494 Lithium, Total	mg/L	0.000588	0.022	0.20	0.198	0.197	0.195	0.17 to 0.23	99.1	70 to 130	0.506	20	
AW25484 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.101	0.100	0.103	0.085 to 0.115	101	70 to 130	0.507	20	
AW25484 Cobalt, Total	mg/L	-0.000000275	0.0044	0.10	0.0979	0.0996	0.103	0.085 to 0.115	97.9	70 to 130	1.73	20	
AW25494 Calcium, Total	mg/L	-0.0333	0.22	5.00	4.69	4.66	4.59	4.25 to 5.75	93.8	70 to 130	0.642	20	
AW25484 Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.0915	0.0907	0.101	0.085 to 0.115	91.5	70 to 130	0.896	20	
AW25484 Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0935	0.0953	0.0940	0.085 to 0.115	93.5	70 to 130	1.95	20	
AW25484 Molybdenum, Total	mg/L	0.00000722	0.0044	0.10	0.109	0.110	0.102	0.085 to 0.115	109	70 to 130	1.24	20	
AW25494 Boron, Total	mg/L	0.00605	0.044	1.00	0.933	0.931	0.919	0.85 to 1.15	93.3	70 to 130	0.215	20	

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Expiration: June 30, 2017

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 Cadmium MDL was increased from 0.0001 to 0.0002. The result for Cd has been correctly changed to Not Detected. SGC 3/20/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 03-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW25490

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW25496	Fluoride, Total	mg/L	0.00	0.3	2.00	1.98	0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20
AW25496	Chloride, Total	mg/L	0.00	0.25	10.00	11.3	1.64	9.90	9 to 11	97.2	80 to 120	3.73	20
AW25487	Solids, Dissolved	mg/L	-1.0	25			2060	50.0	40 to 60			1.08	5
AW25496	Sulfate, Total	mg/L	-0.345	1.0	400	1470	1010	19.9	18 to 22	115	80 to 120	0.00	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. The result for Cd has been correctly changed to Not Detected. SGC 3/20/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 04-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW25491

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	J 0.00206	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.0142	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	10/12/2016	EPA 200.7		1	0.02	0.1	J 0.0916	mg/L
* Calcium, Total	HRG	10/13/2016	EPA 200.7		10	1.0	5.0	389	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/12/2016	EPA 200.7		1	0.01	0.05	0.198	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C		1		125	2800	mg/L
* Chloride, Total	SES	10/11/2016	EPA 300.0		1	0.04	0.25	2.21	mg/L
* Fluoride, Total	SES	10/11/2016	EPA 300.0		1	0.01	0.3	J 0.049	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0		30	9.0	30	1750	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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Alabama Power General Test Laboratory
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Batch QC Summary



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To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 04-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW25491

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW25493 Cadmium, Total	mg/L	0.0000309	0.00044	0.10	0.0960	0.0979	0.0934	0.085 to 0.115	96.0	70 to 130	2.00	20	
AW25493 Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.1000	0.102	0.101	0.085 to 0.115	100	70 to 130	1.73	20	
AW25494 Boron, Total	mg/L	0.00605	0.044	1.00	0.933	0.931	0.919	0.85 to 1.15	93.3	70 to 130	0.215	20	
AW25493 Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.112	0.110	0.107	0.085 to 0.115	112	70 to 130	2.01	20	
AW25493 Molybdenum, Total	mg/L	0.0000722	0.0044	0.10	0.105	0.102	0.102	0.085 to 0.115	105	70 to 130	2.72	20	
AW25494 Calcium, Total	mg/L	-0.0333	0.22	5.00	4.69	4.66	4.59	4.25 to 5.75	93.8	70 to 130	0.642	20	
AW25493 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.106	0.103	0.103	0.085 to 0.115	106	70 to 130	2.70	20	
AW25493 Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0858	0.0843	0.0878	0.085 to 0.115	85.8	70 to 130	1.82	20	
AW25493 Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.104	0.102	0.0997	0.085 to 0.115	104	70 to 130	1.85	20	
AW25494 Mercury, Total by CVAA	mg/L	0.0000760	0.0005	0.004	0.00389	0.00394	0.00399	0.0034 to 0.0046	97.3	70 to 130	1.17	20	
AW25493 Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0929	0.0926	0.0940	0.085 to 0.115	92.9	70 to 130	0.351	20	
AW25494 Lithium, Total	mg/L	0.000588	0.022	0.20	0.198	0.197	0.195	0.17 to 0.23	99.1	70 to 130	0.506	20	
AW25493 Cobalt, Total	mg/L	-0.000000275	0.0044	0.10	0.0983	0.0964	0.103	0.085 to 0.115	98.3	70 to 130	1.95	20	
AW25493 Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0915	0.0890	0.0946	0.085 to 0.115	91.5	70 to 130	2.71	20	
AW25493 Thallium, Total	mg/L	0.00000890	0.00044	0.10	0.0945	0.0943	0.0915	0.085 to 0.115	94.5	70 to 130	0.242	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 04-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW25491

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW25496	Fluoride, Total	mg/L	0.00	0.3	2.00	1.98	0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20
AW25496	Chloride, Total	mg/L	0.00	0.25	10.00	11.3	1.64	9.90	9 to 11	97.2	80 to 120	3.73	20
AW25496	Sulfate, Total	mg/L	-0.345	1.0	400	1470	1010	19.9	18 to 22	115	80 to 120	0.00	20
AW25481	Solids, Dissolved	mg/L	-1.0	25			2060	50.0	40 to 60			1.08	5

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 04-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-11 Dup

Laboratory ID Number: AW25492

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	J 0.00195	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.0141	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	10/12/2016	EPA 200.7		1	0.02	0.1	J 0.0894	mg/L
* Calcium, Total	HRG	10/13/2016	EPA 200.7		10	1.0	5.0	396	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/12/2016	EPA 200.7		1	0.01	0.05	0.198	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C		1		125	2820	mg/L
* Chloride, Total	SES	10/11/2016	EPA 300.0		1	0.04	0.25	2.20	mg/L
* Fluoride, Total	SES	10/11/2016	EPA 300.0		1	0.01	0.3	J 0.050	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0		30	9.0	30	1700	mg/L

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 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 04-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-11 Dup

Laboratory ID Number: AW25492

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW25493 Cadmium, Total	mg/L	0.0000309	0.00044	0.10	0.0960	0.0979	0.0934	0.085 to 0.115	96.0	70 to 130	2.00	20	
AW25493 Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0929	0.0926	0.0940	0.085 to 0.115	92.9	70 to 130	0.351	20	
AW25494 Lithium, Total	mg/L	0.000588	0.022	0.20	0.198	0.197	0.195	0.17 to 0.23	99.1	70 to 130	0.506	20	
AW25493 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.106	0.103	0.103	0.085 to 0.115	106	70 to 130	2.70	20	
AW25493 Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0858	0.0843	0.0878	0.085 to 0.115	85.8	70 to 130	1.82	20	
AW25493 Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.104	0.102	0.0997	0.085 to 0.115	104	70 to 130	1.85	20	
AW25494 Mercury, Total by CVAA	mg/L	0.0000760	0.0005	0.004	0.00389	0.00394	0.00399	0.0034 to 0.0046	97.3	70 to 130	1.17	20	
AW25493 Cobalt, Total	mg/L	-0.000000275	0.0044	0.10	0.0983	0.0964	0.103	0.085 to 0.115	98.3	70 to 130	1.95	20	
AW25493 Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0915	0.0890	0.0946	0.085 to 0.115	91.5	70 to 130	2.71	20	
AW25493 Thallium, Total	mg/L	0.00000890	0.00044	0.10	0.0945	0.0943	0.0915	0.085 to 0.115	94.5	70 to 130	0.242	20	
AW25493 Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.112	0.110	0.107	0.085 to 0.115	112	70 to 130	2.01	20	
AW25493 Molybdenum, Total	mg/L	0.00000722	0.0044	0.10	0.105	0.102	0.102	0.085 to 0.115	105	70 to 130	2.72	20	
AW25494 Calcium, Total	mg/L	-0.0333	0.22	5.00	4.69	4.66	4.59	4.25 to 5.75	93.8	70 to 130	0.642	20	
AW25493 Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.1000	0.102	0.101	0.085 to 0.115	100	70 to 130	1.73	20	
AW25494 Boron, Total	mg/L	0.00605	0.044	1.00	0.933	0.931	0.919	0.85 to 1.15	93.3	70 to 130	0.215	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 04-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-11 Dup

Laboratory ID Number: AW25492

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW25496	Fluoride, Total	mg/L	0.00	0.3		2.00	1.98	0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20
AW25481	Solids, Dissolved	mg/L	-1.0	25				2060	50.0	40 to 60			1.08	5
AW25496	Chloride, Total	mg/L	0.00	0.25		10.00	11.3	1.64	9.90	9 to 11	97.2	80 to 120	3.73	20
AW25496	Sulfate, Total	mg/L	-0.345	1.0		400	1470	1010	19.9	18 to 22	115	80 to 120	0.00	20

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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

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW25493

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Arsenic, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	10/12/2016	EPA 200.7		1	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/12/2016	EPA 200.7		1	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Antimony, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Copper, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/12/2016	EPA 200.7		1	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Nickel, Total	TAS	10/18/2016	EPA 200.8		5	0.0030	0.005	U Not Detected	mg/L
* Silver, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
* Vanadium, Total	TAS	10/18/2016	EPA 200.8		5	0.0030	0.010	U Not Detected	mg/L
* Zinc, Total	TAS	10/18/2016	EPA 200.8		5	0.0080	0.005	U Not Detected	mg/L

General Characteristics

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Expiration: June 30, 2017

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 744 County Road 87, GSC#8
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 FAX (205) 257-1654

Certificate Of Analysis  **Alabama Power**

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW25493

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	10/11/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	10/11/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0		1	0.3	1	U Not Detected	mg/L

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 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW25493

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW25493 Cadmium, Total	mg/L	0.0000309	0.00044	0.10	0.0960	0.0979	0.0934	0.085 to 0.115	96.0	70 to 130	2.00	20	
AW25493 Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.1000	0.102	0.101	0.085 to 0.115	100	70 to 130	1.73	20	
AW25494 Boron, Total	mg/L	0.00605	0.044	1.00	0.933	0.931	0.919	0.85 to 1.15	93.3	70 to 130	0.215	20	
AW25493 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.106	0.103	0.103	0.085 to 0.115	106	70 to 130	2.70	20	
AW25493 Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0858	0.0843	0.0878	0.085 to 0.115	85.8	70 to 130	1.82	20	
AW25493 Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.104	0.102	0.0997	0.085 to 0.115	104	70 to 130	1.85	20	
AW25494 Mercury, Total by CVAA	mg/L	0.0000760	0.0005	0.004	0.00389	0.00394	0.00399	0.0034 to 0.0046	97.3	70 to 130	1.17	20	
AW25493 Cobalt, Total	mg/L	-0.00000275	0.0044	0.10	0.0983	0.0964	0.103	0.085 to 0.115	98.3	70 to 130	1.95	20	
AW25493 Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0915	0.0890	0.0946	0.085 to 0.115	91.5	70 to 130	2.71	20	
AW25493 Thallium, Total	mg/L	0.00000890	0.00044	0.10	0.0945	0.0943	0.0915	0.085 to 0.115	94.5	70 to 130	0.242	20	
AW25493 Zinc, Total	mg/L	0.000278	0.0176	0.10	0.102	0.0997	0.103	0.085 to 0.115	102	70 to 130	2.06	20	
AW25493 Copper, Total	mg/L	0.0000318	0.0044	0.10	0.101	0.0992	0.103	0.085 to 0.115	101	70 to 130	2.21	20	
AW25493 Nickel, Total	mg/L	0.0000361	0.0066	0.10	0.0973	0.0954	0.0908	0.085 to 0.115	97.3	70 to 130	2.00	20	
AW25493 Vanadium, Total	mg/L	0.0000551	0.0066	0.10	0.0954	0.0939	0.0929	0.085 to 0.115	95.4	70 to 130	1.62	20	
AW25493 Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.112	0.110	0.107	0.085 to 0.115	112	70 to 130	2.01	20	
AW25493 Molybdenum, Total	mg/L	0.00000722	0.0044	0.10	0.105	0.102	0.102	0.085 to 0.115	105	70 to 130	2.72	20	
AW25493 Silver, Total	mg/L	0.00000355	0.0044	0.10	0.0956	0.0952	0.0939	0.085 to 0.115	95.6	70 to 130	0.393	20	
AW25494 Calcium, Total	mg/L	-0.0333	0.22	5.00	4.69	4.66	4.59	4.25 to 5.75	93.8	70 to 130	0.642	20	
AW25493 Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0929	0.0926	0.0940	0.085 to 0.115	92.9	70 to 130	0.351	20	
AW25494 Lithium, Total	mg/L	0.000588	0.022	0.20	0.198	0.197	0.195	0.17 to 0.23	99.1	70 to 130	0.506	20	

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 FAX (205) 257-1654

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 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW25493

Sample	Analysis	Units	MB	MB			Sample		LFB	Rec		Prec	
				Limit	Spike	LFM	Duplicate	LFB	Limit	Rec Limit	Prec	Limit	
AW25496	Fluoride, Total	mg/L	0.00	0.3	2.00	1.98	0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20
AW25496	Chloride, Total	mg/L	0.00	0.25	10.00	11.3	1.64	9.90	9 to 11	97.2	80 to 120	3.73	20
AW25496	Sulfate, Total	mg/L	-0.345	1.0	400	1470	1010	19.9	18 to 22	115	80 to 120	0.00	20
AW25481	Solids, Dissolved	mg/L	-1.0	25			2060	50.0	40 to 60			1.08	5

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW25494

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	10/12/2016	EPA 200.7		1	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/12/2016	EPA 200.7		1	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/12/2016	EPA 200.7		1	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	10/11/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	10/11/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0		1	0.3	1	U Not Detected	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW25494

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW25493 Cadmium, Total	mg/L	0.0000309	0.00044	0.10	0.0960	0.0979	0.0934	0.085 to 0.115	96.0	70 to 130	2.00	20	
AW25493 Cobalt, Total	mg/L	-0.00000275	0.0044	0.10	0.0983	0.0964	0.103	0.085 to 0.115	98.3	70 to 130	1.95	20	
AW25493 Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0915	0.0890	0.0946	0.085 to 0.115	91.5	70 to 130	2.71	20	
AW25493 Thallium, Total	mg/L	0.00000890	0.00044	0.10	0.0945	0.0943	0.0915	0.085 to 0.115	94.5	70 to 130	0.242	20	
AW25493 Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0929	0.0926	0.0940	0.085 to 0.115	92.9	70 to 130	0.351	20	
AW25494 Lithium, Total	mg/L	0.000588	0.022	0.20	0.198	0.197	0.195	0.17 to 0.23	99.1	70 to 130	0.506	20	
AW25493 Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.112	0.110	0.107	0.085 to 0.115	112	70 to 130	2.01	20	
AW25493 Molybdenum, Total	mg/L	0.00000722	0.0044	0.10	0.105	0.102	0.102	0.085 to 0.115	105	70 to 130	2.72	20	
AW25494 Calcium, Total	mg/L	-0.0333	0.22	5.00	4.69	4.66	4.59	4.25 to 5.75	93.8	70 to 130	0.642	20	
AW25493 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.106	0.103	0.103	0.085 to 0.115	106	70 to 130	2.70	20	
AW25493 Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0858	0.0843	0.0878	0.085 to 0.115	85.8	70 to 130	1.82	20	
AW25493 Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.104	0.102	0.0997	0.085 to 0.115	104	70 to 130	1.85	20	
AW25494 Mercury, Total by CVAA	mg/L	0.0000760	0.0005	0.004	0.00389	0.00394	0.00399	0.0034 to 0.0046	97.3	70 to 130	1.17	20	
AW25493 Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.1000	0.102	0.101	0.085 to 0.115	100	70 to 130	1.73	20	
AW25494 Boron, Total	mg/L	0.00605	0.044	1.00	0.933	0.931	0.919	0.85 to 1.15	93.3	70 to 130	0.215	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW25494

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW25496	Fluoride, Total	mg/L	0.00	0.3	2.00	1.98	0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20
AW25481	Solids, Dissolved	mg/L	-1.0	25			2060	50.0	40 to 60			1.08	5
AW25496	Chloride, Total	mg/L	0.00	0.25	10.00	11.3	1.64	9.90	9 to 11	97.2	80 to 120	3.73	20
AW25496	Sulfate, Total	mg/L	-0.345	1.0	400	1470	1010	19.9	18 to 22	115	80 to 120	0.00	20

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CC:

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW25495

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	0.0431	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.0143	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	10/12/2016	EPA 200.7		1	0.02	0.1	0.179	mg/L
* Calcium, Total	HRG	10/13/2016	EPA 200.7		10	1.0	5.0	344	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	0.0479	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/12/2016	EPA 200.7		1	0.01	0.05	0.0757	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C		1		250	3580	mg/L
* Chloride, Total	SES	10/11/2016	EPA 300.0		1	0.04	0.25	4.12	mg/L
* Fluoride, Total	SES	10/11/2016	EPA 300.0		1	0.01	0.3	J 0.090	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0		40	12.0	40	2330	mg/L

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW25495

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW25493 Cadmium, Total	mg/L	0.0000309	0.00044	0.10	0.0960	0.0979	0.0934	0.085 to 0.115	96.0	70 to 130	2.00	20	
AW25493 Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.1000	0.102	0.101	0.085 to 0.115	100	70 to 130	1.73	20	
AW25494 Boron, Total	mg/L	0.00605	0.044	1.00	0.933	0.931	0.919	0.85 to 1.15	93.3	70 to 130	0.215	20	
AW25504 Mercury, Total by CVAA	mg/L	0.0000916	0.0005	0.004	0.00374	0.00388	0.00396	0.0034 to 0.0046	93.4	70 to 130	3.91	20	
AW25493 Cobalt, Total	mg/L	-0.000000275	0.0044	0.10	0.0983	0.0964	0.103	0.085 to 0.115	98.3	70 to 130	1.95	20	
AW25493 Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0915	0.0890	0.0946	0.085 to 0.115	91.5	70 to 130	2.71	20	
AW25493 Thallium, Total	mg/L	0.00000890	0.00044	0.10	0.0945	0.0943	0.0915	0.085 to 0.115	94.5	70 to 130	0.242	20	
AW25493 Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.112	0.110	0.107	0.085 to 0.115	112	70 to 130	2.01	20	
AW25493 Molybdenum, Total	mg/L	0.00000722	0.0044	0.10	0.105	0.102	0.102	0.085 to 0.115	105	70 to 130	2.72	20	
AW25494 Calcium, Total	mg/L	-0.0333	0.22	5.00	4.69	4.66	4.59	4.25 to 5.75	93.8	70 to 130	0.642	20	
AW25493 Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0929	0.0926	0.0940	0.085 to 0.115	92.9	70 to 130	0.351	20	
AW25494 Lithium, Total	mg/L	0.000588	0.022	0.20	0.198	0.197	0.195	0.17 to 0.23	99.1	70 to 130	0.506	20	
AW25493 Antimony, Total	mg/L	0.000122	0.00132	0.10	0.106	0.103	0.103	0.085 to 0.115	106	70 to 130	2.70	20	
AW25493 Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0858	0.0843	0.0878	0.085 to 0.115	85.8	70 to 130	1.82	20	
AW25493 Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.104	0.102	0.0997	0.085 to 0.115	104	70 to 130	1.85	20	

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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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW25495

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW25496	Fluoride, Total	mg/L	0.00	0.3	2.00	1.98	0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20
AW25496	Chloride, Total	mg/L	0.00	0.25	10.00	11.3	1.64	9.90	9 to 11	97.2	80 to 120	3.73	20
AW25481	Solids, Dissolved	mg/L	-1.0	25			2060	50.0	40 to 60			1.08	5
AW25496	Sulfate, Total	mg/L	-0.345	1.0	400	1470	1010	19.9	18 to 22	115	80 to 120	0.00	20

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

Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW25496

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Radiological											
Total Radium, Test America	SGC	12/6/2016	EPA 9315/9320			1				Attached	
Metals, Cyanide, Total Phenols											
* Antimony, Total	TAS	10/18/2016	EPA 200.8			5	0.00060	0.0030	U	Not Detected	mg/L
* Arsenic, Total	TAS	10/18/2016	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	TAS	10/18/2016	EPA 200.8			5	0.0020	0.010		0.0230	mg/L
* Beryllium, Total	TAS	10/18/2016	EPA 200.8			5	0.00060	0.0030	U	Not Detected	mg/L
* Boron, Total	HRG	10/12/2016	EPA 200.7			1	0.02	0.1		0.187	mg/L
* Calcium, Total	HRG	10/13/2016	EPA 200.7			10	1.0	5.0		225	mg/L
* Cadmium, Total	TAS	10/18/2016	EPA 200.8			5	0.0002	0.0010	U	Not Detected	mg/L
* Cobalt, Total	TAS	10/18/2016	EPA 200.8			5	0.0020	0.010	J	0.00663	mg/L
* Chromium, Total	TAS	10/18/2016	EPA 200.8			5	0.0020	0.010	U	Not Detected	mg/L
* Mercury, Total by CVAA	MCW	10/19/2016	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/12/2016	EPA 200.7			1	0.01	0.05		0.231	mg/L
* Molybdenum, Total	TAS	10/18/2016	EPA 200.8			5	0.0020	0.010	U	Not Detected	mg/L
* Lead, Total	TAS	10/18/2016	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	TAS	10/18/2016	EPA 200.8			5	0.0020	0.010	U	Not Detected	mg/L
* Thallium, Total	TAS	10/18/2016	EPA 200.8			5	0.00020	0.0010	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	DLJ	10/12/2016	SM 2540C			1		100		1640	mg/L
* Chloride, Total	SES	10/11/2016	EPA 300.0			1	0.04	0.25		1.58	mg/L
* Fluoride, Total	SES	10/11/2016	EPA 300.0			1	0.01	0.3	J	0.086	mg/L
* Sulfate, Total	SES	10/11/2016	EPA 300.0			20	6.0	20		1010	mg/L

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Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW25496

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AW25493	Cadmium, Total	mg/L	0.0000309	0.00044	0.10	0.0960	0.0979	0.0934	0.085 to 0.115	96.0	70 to 130	2.00	20
AW25493	Lead, Total	mg/L	0.0000102	0.0022	0.10	0.0929	0.0926	0.0940	0.085 to 0.115	92.9	70 to 130	0.351	20
AW25494	Lithium, Total	mg/L	0.000588	0.022	0.20	0.198	0.197	0.195	0.17 to 0.23	99.1	70 to 130	0.506	20
AW25493	Cobalt, Total	mg/L	-0.000000275	0.0044	0.10	0.0983	0.0964	0.103	0.085 to 0.115	98.3	70 to 130	1.95	20
AW25493	Selenium, Total	mg/L	0.0000645	0.0044	0.10	0.0915	0.0890	0.0946	0.085 to 0.115	91.5	70 to 130	2.71	20
AW25493	Thallium, Total	mg/L	0.00000890	0.00044	0.10	0.0945	0.0943	0.0915	0.085 to 0.115	94.5	70 to 130	0.242	20
AW25493	Barium, Total	mg/L	-0.0000102	0.0044	0.10	0.112	0.110	0.107	0.085 to 0.115	112	70 to 130	2.01	20
AW25493	Molybdenum, Total	mg/L	0.00000722	0.0044	0.10	0.105	0.102	0.102	0.085 to 0.115	105	70 to 130	2.72	20
AW25494	Calcium, Total	mg/L	-0.0333	0.22	5.00	4.69	4.66	4.59	4.25 to 5.75	93.8	70 to 130	0.642	20
AW25493	Antimony, Total	mg/L	0.000122	0.00132	0.10	0.106	0.103	0.103	0.085 to 0.115	106	70 to 130	2.70	20
AW25493	Arsenic, Total	mg/L	0.0000142	0.0022	0.10	0.0858	0.0843	0.0878	0.085 to 0.115	85.8	70 to 130	1.82	20
AW25493	Chromium, Total	mg/L	0.0000243	0.0044	0.10	0.104	0.102	0.0997	0.085 to 0.115	104	70 to 130	1.85	20
AW25493	Beryllium, Total	mg/L	0.0000139	0.00132	0.10	0.1000	0.102	0.101	0.085 to 0.115	100	70 to 130	1.73	20
AW25494	Boron, Total	mg/L	0.00605	0.044	1.00	0.933	0.931	0.919	0.85 to 1.15	93.3	70 to 130	0.215	20
AW25504	Mercury, Total by CVAA	mg/L	0.0000916	0.0005	0.004	0.00374	0.00388	0.00396	0.0034 to 0.0046	93.4	70 to 130	3.91	20

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: CORRECTED COPY: Reporting Limit for TDS was incorrectly listed as 2.5 mg/L. The RL has now been corrected.
 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

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



Corrected Copy



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 05-Oct-16
 Customer ID:
 Delivery Date: 07-Oct-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW25496

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW25481	Solids, Dissolved	mg/L	-1.0	25			2060	50.0	40 to 60			1.08	5
AW25496	Fluoride, Total	mg/L	0.00	0.3	2.00	1.98	0.085	2.00	1.8 to 2.2	94.7	80 to 120	1.17	20
AW25496	Sulfate, Total	mg/L	-0.345	1.0	400	1470	1010	19.9	18 to 22	115	80 to 120	0.00	20
AW25496	Chloride, Total	mg/L	0.00	0.25	10.00	11.3	1.64	9.90	9 to 11	97.2	80 to 120	3.73	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

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 Cadmium MDL was increased from 0.0001 to 0.0002. SGC 3/20/17

CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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

Requested Complete Date	<input type="text" value="Routine"/>	Results To	<input type="text" value="Dustin Brooks, John Pugh, Greg Dyer"/>
Site Representative	<input type="text" value="Che George"/>	Requested By	<input type="text" value="Greg Dyer"/>
Collector	<input type="text" value="Ben Rothschild"/>	Location	<input type="text" value="Gorgas Landfill"/>

Analysis Requested

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW10	10/05/2016	10:28	3	Groundwater		AW25496

Relinquished By	Received By	Date/Time
<i>Ben Rothschild</i>	Sarah Copeland <small>Digitally signed by Sarah Copeland Date: 2016.10.11 07:51:47 -05'00'</small>	10/11/2016 07:51

SmarTroll ID

Turbidity ID

All metals and radiological bottles have pH < 2

Cooler Temp

Thermometer ID

pH Strip ID



Chain of Custody

Groundwater

APC General Testing Laboratory
General Service Complex Building 8

Field Complete

Lab Complete

Lab ETA

Requested Complete Date	<input type="text" value="Routine"/>	Results To	<input type="text" value="Dustin Brooks, John Pugh, Greg Dyer"/>
Site Representative	<input type="text" value="Che George"/>	Requested By	<input type="text" value="Greg Dyer"/>
Collector	<input type="text" value="Jason Rouss"/>	Location	<input type="text" value="Gorgas Landfill"/>
Analysis Requested	<input type="text" value="Bottle 1: Radium 226 & 228 (1) 1L bottle, Bottle 2: Metals and Hg (1) 500 mL bottle, Bottle 3: TDS and Anions (1) 500 mL bottle"/>		
Comments	<input type="text" value="Data collected on 10/5/16 obtained using SmartTroll 5141-26150-1-1"/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-11	10/04/2016	10:08	3	Groundwater		AW25491
MW-11 DUP	10/04/2016	10:08	3	Sample Duplicate		AW25492
FB-1	10/05/2016	15:40	3	Field Blank		AW25493
EB-1	10/05/2016	09:25	3	Equipment Blank		AW25494
MW-12	10/05/2016	15:15	3	Groundwater		AW25495

Relinquished By	Received By	Date/Time
<input type="text" value="Jason Rouss"/>	Sarah Copeland	10/11/2016 07:56
	<small>Digitally signed by Sarah Copeland Date: 2016.10.11 07:56:37 -05'00'</small>	

SmarTroll ID	<input type="text" value="4696-23444-3-3"/>	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> Cooler Temp <input type="text" value="0.5 degrees C"/> Thermometer ID <input type="text" value="5408-27568-2-2"/> pH Strip ID <input type="text" value="5521-28275-20-19"/>
Turbidity ID	<input type="text" value="4677-23342-4-1"/>	



Chain of Custody

Groundwater

APC General Testing Laboratory
General Service Complex Building 8

Field Complete

Lab Complete

Lab ETA

Requested Complete Date	<input type="text" value="Routine"/>	Results To	<input type="text" value="Dustin Brooks, John Pugh, 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: Radium 226 & 228 (1) 1L bottle, Bottle 2: Metals and Hg (1) 500 mL bottle, Bottle 3: TDS and Anions (1) 500 mL bottle"/>
Comments	<input type="text"/>

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	10/03/2016	11:29	3	Groundwater		AW25487
MW-3	10/04/2016	11:03	3	Groundwater		AW25488
MW-2	10/03/2016	12:32	3	Groundwater		AW25489
MW-4	10/03/2016	14:40	3	Groundwater		AW25490

Relinquished By		Received By	Date/Time
			10/04/2016 16:17
	Sarah Copeland	Digitally signed by Sarah Copeland Date: 2016.10.11 07:58:59 -05'00'	10/11/2016 07:58

SmarTroll ID	<input type="text" value="5151-26193-1-1"/>	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="0.5 degrees C"/>
		Thermometer ID	<input type="text" value="5408-27568-2-2"/>
		pH Strip ID	<input type="text" value="5521-28275-20-19"/>

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: 400-128652-1

TestAmerica Sample Delivery Group: Gorgas Landfill (4)

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:

11/28/2016 10:32:24 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-128652-1
SDG: Gorgas Landfill (4)

Job ID: 400-128652-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-128652-1

RAD

Method(s) PrecSep_0: Radium-228 Prep Batch 160-275185: The following samples were prepared at a reduced aliquot due to limited volume: AW25487 MW-1 (400-128652-1), AW25488 MW-3 (400-128652-2), AW25489 MW-2 (400-128652-3), AW25490 MW-4 (400-128652-4), AW25491 MW-11 (400-128652-5), AW25492 MW-11 DUP (400-128652-6), AW25493 FB-1 (400-128652-7), AW25494 EB-1 (400-128652-8), AW25495 MW-12 (400-128652-9) and AW25496 MW-10 (400-128652-10).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-275157: The following samples were prepared at a reduced aliquot due to limited volume: AW25487 MW-1 (400-128652-1), AW25488 MW-3 (400-128652-2), AW25489 MW-2 (400-128652-3), AW25490 MW-4 (400-128652-4), AW25491 MW-11 (400-128652-5), AW25492 MW-11 DUP (400-128652-6), AW25493 FB-1 (400-128652-7), AW25494 EB-1 (400-128652-8), AW25495 MW-12 (400-128652-9) and AW25496 MW-10 (400-128652-10).



Method Summary

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

TestAmerica Job ID: 400-128652-1
SDG: Gorgas Landfill (4)

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: 400-128652-1
SDG: Gorgas Landfill (4)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-128652-1	AW25487 MW-1	Water	10/03/16 11:29	10/13/16 15:30
400-128652-2	AW25488 MW-3	Water	10/04/16 11:03	10/13/16 15:30
400-128652-3	AW25489 MW-2	Water	10/03/16 12:32	10/13/16 15:30
400-128652-4	AW25490 MW-4	Water	10/03/16 14:40	10/13/16 15:30
400-128652-5	AW25491 MW-11	Water	10/04/16 10:08	10/13/16 15:30
400-128652-6	AW25492 MW-11 DUP	Water	10/04/16 10:08	10/13/16 15:30
400-128652-7	AW25493 FB-1	Water	10/05/16 15:40	10/13/16 15:30
400-128652-8	AW25494 EB-1	Water	10/05/16 09:25	10/13/16 15:30
400-128652-9	AW25495 MW-12	Water	10/05/16 15:15	10/13/16 15:30
400-128652-10	AW25496 MW-10	Water	10/05/16 10:28	10/13/16 15:30

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25487 MW-1

Lab Sample ID: 400-128652-1

Date Collected: 10/03/16 11:29

Matrix: Water

Date Received: 10/13/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.381		0.207	0.210	1.00	0.280	pCi/L	10/19/16 12:32	11/16/16 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					10/19/16 12:32	11/16/16 10:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.155	U	0.318	0.319	1.00	0.543	pCi/L	10/19/16 15:00	11/15/16 14:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					10/19/16 15:00	11/15/16 14:41	1
Y Carrier	94.6		40 - 110					10/19/16 15:00	11/15/16 14:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.537	U	0.380	0.382	5.00	0.543	pCi/L		11/17/16 12:20	1

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25488 MW-3

Lab Sample ID: 400-128652-2

Date Collected: 10/04/16 11:03

Matrix: Water

Date Received: 10/13/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0368	U	0.154	0.154	1.00	0.284	pCi/L	10/19/16 12:32	11/16/16 10:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					10/19/16 12:32	11/16/16 10:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.477	U	0.357	0.360	1.00	0.564	pCi/L	10/19/16 15:00	11/15/16 14:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					10/19/16 15:00	11/15/16 14:41	1
Y Carrier	97.6		40 - 110					10/19/16 15:00	11/15/16 14:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.514	U	0.389	0.391	5.00	0.564	pCi/L		11/17/16 12:20	1

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25489 MW-2

Lab Sample ID: 400-128652-3

Date Collected: 10/03/16 12:32

Matrix: Water

Date Received: 10/13/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.240	U	0.179	0.180	1.00	0.265	pCi/L	10/19/16 12:32	11/16/16 10:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					10/19/16 12:32	11/16/16 10:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.605	U	0.395	0.399	1.00	0.611	pCi/L	10/19/16 15:00	11/15/16 14:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					10/19/16 15:00	11/15/16 14:41	1
Y Carrier	88.2		40 - 110					10/19/16 15:00	11/15/16 14:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.845		0.434	0.438	5.00	0.611	pCi/L		11/17/16 12:20	1

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25490 MW-4

Lab Sample ID: 400-128652-4

Date Collected: 10/03/16 14:40

Matrix: Water

Date Received: 10/13/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.104	U	0.187	0.188	1.00	0.323	pCi/L	10/19/16 12:32	11/16/16 10:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					10/19/16 12:32	11/16/16 10:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.486	U	0.381	0.384	1.00	0.605	pCi/L	10/19/16 15:00	11/15/16 14:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					10/19/16 15:00	11/15/16 14:41	1
Y Carrier	89.3		40 - 110					10/19/16 15:00	11/15/16 14:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.590	U	0.425	0.427	5.00	0.605	pCi/L		11/17/16 12:20	1

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25491 MW-11

Lab Sample ID: 400-128652-5

Date Collected: 10/04/16 10:08

Matrix: Water

Date Received: 10/13/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.249	U	0.206	0.207	1.00	0.318	pCi/L	10/19/16 12:32	11/16/16 10:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					10/19/16 12:32	11/16/16 10:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.124	U	0.329	0.329	1.00	0.566	pCi/L	10/19/16 15:00	11/15/16 14:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					10/19/16 15:00	11/15/16 14:41	1
Y Carrier	93.5		40 - 110					10/19/16 15:00	11/15/16 14:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.372	U	0.388	0.388	5.00	0.566	pCi/L		11/17/16 12:20	1

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25492 MW-11 DUP

Lab Sample ID: 400-128652-6

Date Collected: 10/04/16 10:08

Matrix: Water

Date Received: 10/13/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.500		0.254	0.258	1.00	0.345	pCi/L	10/19/16 12:32	11/16/16 10:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.6		40 - 110					10/19/16 12:32	11/16/16 10:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.32		0.484	0.499	1.00	0.662	pCi/L	10/19/16 15:00	11/15/16 14:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.6		40 - 110					10/19/16 15:00	11/15/16 14:42	1
Y Carrier	85.2		40 - 110					10/19/16 15:00	11/15/16 14:42	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	1.82		0.547	0.562	5.00	0.662	pCi/L		11/17/16 12:20	1

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25493 FB-1

Lab Sample ID: 400-128652-7

Date Collected: 10/05/16 15:40

Matrix: Water

Date Received: 10/13/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0734	U	0.168	0.168	1.00	0.296	pCi/L	10/19/16 12:32	11/16/16 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.7		40 - 110					10/19/16 12:32	11/16/16 10:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.144	U	0.287	0.288	1.00	0.490	pCi/L	10/19/16 15:00	11/15/16 14:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.7		40 - 110					10/19/16 15:00	11/15/16 14:42	1
Y Carrier	92.0		40 - 110					10/19/16 15:00	11/15/16 14:42	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	0.217	U	0.333	0.333	5.00	0.490	pCi/L		11/17/16 12:20	1

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25494 EB-1

Lab Sample ID: 400-128652-8

Date Collected: 10/05/16 09:25

Matrix: Water

Date Received: 10/13/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.274		0.179	0.180	1.00	0.254	pCi/L	10/19/16 12:32	11/16/16 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					10/19/16 12:32	11/16/16 10:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.127	U	0.287	0.287	1.00	0.495	pCi/L	10/19/16 15:00	11/15/16 14:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					10/19/16 15:00	11/15/16 14:42	1
Y Carrier	85.6		40 - 110					10/19/16 15:00	11/15/16 14:42	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	0.402	U	0.338	0.339	5.00	0.495	pCi/L		11/17/16 12:20	1

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25495 MW-12

Lab Sample ID: 400-128652-9

Date Collected: 10/05/16 15:15

Matrix: Water

Date Received: 10/13/16 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.385		0.218	0.221	1.00	0.307	pCi/L	10/19/16 12:32	11/16/16 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					10/19/16 12:32	11/16/16 10:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.109	U	0.333	0.333	1.00	0.577	pCi/L	10/19/16 15:00	11/15/16 14:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					10/19/16 15:00	11/15/16 14:42	1
Y Carrier	88.2		40 - 110					10/19/16 15:00	11/15/16 14:42	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	U	0.398	0.400	5.00	0.577	pCi/L		11/17/16 12:20	1

Client Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25496 MW-10

Lab Sample ID: 400-128652-10

Date Collected: 10/05/16 10:28

Matrix: Water

Date Received: 10/13/16 15:30

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		0.194	0.196	1.00	0.285	pCi/L	10/19/16 12:32	11/16/16 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					10/19/16 12:32	11/16/16 10:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.229	U	0.297	0.298	1.00	0.494	pCi/L	10/19/16 15:00	11/15/16 14:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					10/19/16 15:00	11/15/16 14:42	1
Y Carrier	93.5		40 - 110					10/19/16 15:00	11/15/16 14:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.515		0.355	0.357	5.00	0.494	pCi/L		11/17/16 12:20	1

Definitions/Glossary

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

TestAmerica Job ID: 400-128652-1
SDG: Gorgas Landfill (4)

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25487 MW-1

Lab Sample ID: 400-128652-1

Date Collected: 10/03/16 11:29

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279648	11/16/16 10:40	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	RTM	TAL SL

Client Sample ID: AW25488 MW-3

Lab Sample ID: 400-128652-2

Date Collected: 10/04/16 11:03

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279648	11/16/16 10:46	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	RTM	TAL SL

Client Sample ID: AW25489 MW-2

Lab Sample ID: 400-128652-3

Date Collected: 10/03/16 12:32

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279648	11/16/16 10:46	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	RTM	TAL SL

Client Sample ID: AW25490 MW-4

Lab Sample ID: 400-128652-4

Date Collected: 10/03/16 14:40

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279648	11/16/16 10:47	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25491 MW-11

Lab Sample ID: 400-128652-5

Date Collected: 10/04/16 10:08

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279648	11/16/16 10:47	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	RTM	TAL SL

Client Sample ID: AW25492 MW-11 DUP

Lab Sample ID: 400-128652-6

Date Collected: 10/04/16 10:08

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279648	11/16/16 10:47	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	RTM	TAL SL

Client Sample ID: AW25493 FB-1

Lab Sample ID: 400-128652-7

Date Collected: 10/05/16 15:40

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279596	11/16/16 10:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	RTM	TAL SL

Client Sample ID: AW25494 EB-1

Lab Sample ID: 400-128652-8

Date Collected: 10/05/16 09:25

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279596	11/16/16 10:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Client Sample ID: AW25495 MW-12

Lab Sample ID: 400-128652-9

Date Collected: 10/05/16 15:15

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279596	11/16/16 10:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	RTM	TAL SL

Client Sample ID: AW25496 MW-10

Lab Sample ID: 400-128652-10

Date Collected: 10/05/16 10:28

Matrix: Water

Date Received: 10/13/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			275157	10/19/16 12:32	AS	TAL SL
Total/NA	Analysis	9315		1	279596	11/16/16 10:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			275185	10/19/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	279363	11/15/16 14:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	279787	11/17/16 12:20	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: 400-128652-1
SDG: Gorgas Landfill (4)

Rad

Prep Batch: 275157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128652-1	AW25487 MW-1	Total/NA	Water	PrecSep-21	
400-128652-2	AW25488 MW-3	Total/NA	Water	PrecSep-21	
400-128652-3	AW25489 MW-2	Total/NA	Water	PrecSep-21	
400-128652-4	AW25490 MW-4	Total/NA	Water	PrecSep-21	
400-128652-5	AW25491 MW-11	Total/NA	Water	PrecSep-21	
400-128652-6	AW25492 MW-11 DUP	Total/NA	Water	PrecSep-21	
400-128652-7	AW25493 FB-1	Total/NA	Water	PrecSep-21	
400-128652-8	AW25494 EB-1	Total/NA	Water	PrecSep-21	
400-128652-9	AW25495 MW-12	Total/NA	Water	PrecSep-21	
400-128652-10	AW25496 MW-10	Total/NA	Water	PrecSep-21	
MB 160-275157/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-275157/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-128652-A-15-B MS	Matrix Spike	Total/NA	Water	PrecSep-21	
400-128652-A-15-C MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 275185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128652-1	AW25487 MW-1	Total/NA	Water	PrecSep_0	
400-128652-2	AW25488 MW-3	Total/NA	Water	PrecSep_0	
400-128652-3	AW25489 MW-2	Total/NA	Water	PrecSep_0	
400-128652-4	AW25490 MW-4	Total/NA	Water	PrecSep_0	
400-128652-5	AW25491 MW-11	Total/NA	Water	PrecSep_0	
400-128652-6	AW25492 MW-11 DUP	Total/NA	Water	PrecSep_0	
400-128652-7	AW25493 FB-1	Total/NA	Water	PrecSep_0	
400-128652-8	AW25494 EB-1	Total/NA	Water	PrecSep_0	
400-128652-9	AW25495 MW-12	Total/NA	Water	PrecSep_0	
400-128652-10	AW25496 MW-10	Total/NA	Water	PrecSep_0	
MB 160-275185/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-275185/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-128652-A-15-H MS	Matrix Spike	Total/NA	Water	PrecSep_0	
400-128652-A-15-I MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-275157/1-A
Matrix: Water
Analysis Batch: 279648

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 275157

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1084	U	0.151	0.152	1.00	0.255	pCi/L	10/19/16 12:32	11/16/16 10:39	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					10/19/16 12:32	11/16/16 10:39	1

Lab Sample ID: LCS 160-275157/2-A
Matrix: Water
Analysis Batch: 279648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 275157

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	14.8	19.02		2.00	1.00	0.301	pCi/L	129	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	88.9		40 - 110						

Lab Sample ID: 400-128652-A-15-B MS
Matrix: Water
Analysis Batch: 279596

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 275157

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.348		14.8	18.39		1.96	1.00	0.320	pCi/L	122	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	79.2		40 - 110								

Lab Sample ID: 400-128652-A-15-C MSD
Matrix: Water
Analysis Batch: 279596

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 275157

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.348		14.8	15.61		1.71	1.00	0.347	pCi/L	103	75 - 138	0.75	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	81.5		40 - 110										

QC Sample Results

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-275185/1-A
Matrix: Water
Analysis Batch: 279363

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 275185

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3766	U	0.370	0.372	1.00	0.601	pCi/L	10/19/16 15:00	11/15/16 14:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					10/19/16 15:00	11/15/16 14:41	1
Y Carrier	86.4		40 - 110					10/19/16 15:00	11/15/16 14:41	1

Lab Sample ID: LCS 160-275185/2-A
Matrix: Water
Analysis Batch: 279363

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 275185

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	19.0	19.76		2.15	1.00	0.576	pCi/L	104	56 - 140
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	88.9		40 - 110						
Y Carrier	89.0		40 - 110						

Lab Sample ID: 400-128652-A-15-H MS
Matrix: Water
Analysis Batch: 279363

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 275185

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.335	U	19.0	22.86		2.50	1.00	0.650	pCi/L	120	45 - 150
Carrier	%Yield	Qualifier	Limits								
Ba Carrier	79.2		40 - 110								
Y Carrier	81.9		40 - 110								

Lab Sample ID: 400-128652-A-15-I MSD
Matrix: Water
Analysis Batch: 279363

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 275185

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.335	U	19.0	18.66		2.06	1.00	0.587	pCi/L	98	45 - 150	0.92	1
Carrier	%Yield	Qualifier	Limits										
Ba Carrier	81.5		40 - 110										
Y Carrier	89.7		40 - 110										

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

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information
 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: sgcopella@southernco.com
 Project #: 40007143
 CCR
 Site: Gorgas Landfill (4)

Sampler: A.G./J.R./B.R.
Lab P/N: Whitmire, Cheyenne R
Phone: cheyenne.whitmire@testamericainc.com
E-Mail: cheyenne.whitmire@testamericainc.com

Carrier Tracking No(s):
COC No: 400-56525-24537.1
Page: Page 1 of 1
Job #: 400-128652

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Seawater, Other)	Preservation Code	Field Filtered Sample (Yes/No)	Perforated MS/MSD (Yes/No)	9315 Ra226, 9320 Ra228, Ra226Ra228 GFPC	Total Number of Containers	Special Instructions/Note:
AW25487	10/3/16	1129	G	Water		X	X		1	MW-1
AW25488	10/4/16	1103	G	Water		X	X		1	MW-3
AW25489	10/3/16	1232	G	Water		X	X		1	MM-2
AW25490	10/3/16	1440	G	Water		X	X		1	MW-4
AW25491	10/4/16	1008	G	Water		X	X		1	MM-11
AW25492	10/4/16	1008	G	Water		X	X		1	MW-11 Dup (Sample Duplicate)
AW25493	10/5/16	1540	G	Water		X	X		1	FB-1 (Field Blank)
AW25494	10/5/16	0925	G	Water		X	X		1	ES-1 (Equipment Blank)
AW25495	10/5/16	1515	G	Water		X	X		1	MMW-12
AW25496	10/5/16	1028	G	Water		X	X		1	MMW-10

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify) _____

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____
Relinquished by: Sarah Copeland Date/Time: 10/12/2016; 0830
Relinquished by: _____ Date/Time: _____
Relinquished by: _____ Date/Time: _____

Company: APC
Company: Company
Company: Company

Received by: _____ Date/Time: 10/13/16 1530
Received by: _____ Date/Time: _____
Received by: _____ Date/Time: _____

Cooler Temperature(s) °C and Other Remarks:

Custody Seal No.: Yes No



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-128652-1
SDG Number: Gorgas Landfill (4)

Login Number: 128652

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	N/A	Thermal preservation not required.
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	



Certification Summary

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

TestAmerica Job ID: 400-128652-1
 SDG: Gorgas Landfill (4)

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	003757	11-30-16 *
Iowa	State Program	7	373	12-01-16 *
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA160008	12-31-16 *
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542016-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-17

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 400-128652-1
SDG: Gorgas Landfill (4)

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-0016	01-09-17
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17

* Certification renewal pending - certification considered valid.

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

 Alabama Power



Sample Group : WMWGORLF_1061

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1061

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>Chloride Batch ID</u>	<u>Fluoride Batch ID</u>	<u>Sulfate Batch ID</u>	<u>Project ID</u>
AW28922	582754	582756	582758	WMWGORLF_1061
AW28923	582754	582756	582758	WMWGORLF_1061
AW28924	582754	582756	582758	WMWGORLF_1061
AW28925	582754	582756	582758	WMWGORLF_1061
AW28926	582754	582756	582758	WMWGORLF_1061
AW28927	582754	582756	582758	WMWGORLF_1061
AW28928	582754	582756	582758	WMWGORLF_1061
AW28929	582754	582756	582758	WMWGORLF_1061
AW28959	582754	582756	582758	WMWGORLF_1061

4. All of the above samples were analyzed and prepared by EPA 300.0.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.
7. Sample AW28960 was not analyzed for anions. The complete sample was used during TDS analysis.

General Quality Control Procedures:

- Prior to sample analysis, an instrument performance check (IPC) was analyzed and all criteria were met except the initial performance check sample (IPC) for the initial calibration of 11/30/16 for fluoride recovered above the upper limit of 110% (2.20 mg/L), at 2.39 mg/L (120% recovery). Since these samples were setup to run overnight on an auto-injector, the high fluoride result was not immediately noticed and the associated batch samples were analyzed under a non-compliant standard. A subsequent initial calibration was run on 12/02/16 with acceptable fluoride IPC response of 1.90 mg/L (95% recovery). The affected samples were not re-analyzed but were re-processed under the more recent calibration, and the re-processed results were reported. Since samples are not normally re-processed without re-analysis, the initial fluoride results were compared to the re-processed results to assess the difference between the results. Although the fluoride results under the 11/30/16 calibration were generally higher than the corresponding 12/02/16 ICAL re-processed results, the actual precision values between paired results were well within acceptable limits for replicate samples, as measured by absolute difference between results being less than the reporting limit for fluoride of 0.30 mg/L. The highest difference between results was 0.064 mg/L, which is slightly over 1/5 the RL value, while the remainder of the differences were 1/5 or less than the RL value. The reported values may conservatively be considered as potentially low-biased, but the results as noted above are within the normal precision limits for replicate samples.



- All laboratory reagent blanks were less than the method detection limits for the requested anions, with the following exceptions: the blank for anion sulfate presented a negative concentration above the MDL of 0.3, at -0.657 mg/L. The result for sulfate for sample AW28927 was reported with a negative value below 10x the blank results, and should be considered as a quantitatively estimated non-detect value, with indication of potential low bias on the reported RL value.
- All laboratory fortified blanks (LFB) were within acceptance criteria for the anions requested, with the following exception: The closing sequence LFB for fluoride was above the fluoride upper limit, at 2.45 mg/L (123% recovery). The reported values should be considered as potentially high biased.
- 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 laboratory fortified matrix (LFM) sample was analyzed with each batch. All acceptance criteria for accuracy were met.
 - A sample duplicate and/or laboratory fortified matrix duplicate were analyzed with each batch. All acceptance criteria for precision were met. It is noted that separate and distinct criteria for duplicate precision calculations, based on sample and duplicate anion concentrations, are used to assess precision compliance. These are as follow: if the sample and duplicate are both greater than 5x anion Reporting Limit (RL) concentration, the precision is calculated and reported as relative percent difference (RPD), with an acceptance range of 0 - 20%; if either the sample or duplicate are less than 5x anion RL, the precision is calculated and reported as the absolute value of the difference between the two concentrations, with an acceptance range of less than or equal to the anion RL value.
8. Samples AW28922 and AW28923 were re-analyzed for sulfate at a 20x dilution, and samples AW28925 and AW28959 were re-analyzed for sulfate at a 50x dilution, due to undiluted results exceeding the calibrated range of the detector. The dilution results for sulfate for these respective samples should be used; reporting limit (RL) values are adjusted upward to reflect the dilution factor applied.



<u>Sample ID</u>		<u>Analyte</u>		<u>Dilution Factor</u>
AW28922		Sulfate		20X
AW28923		Sulfate		20X
AW28925		Sulfate		50X
AW28959		Sulfate		50X

9. The raw data results are shown with dilution factors included, when dilutions are manually performed by the analyst.

The raw data results are shown without dilution factor corrections, when dilutions are run automatically by the instrument.



Metals ICP

Gorgas Landfill

WMWGORLF_1061

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>
AW28922	20161227C_20161228C_20170109	WMWGORLF_1061
AW28923	20161227C_20161228C_20170109	WMWGORLF_1061
AW28925	20161227C_20161228C_20170109	WMWGORLF_1061
AW28926	20161227C_20161228C_20170109	WMWGORLF_1061
AW28927	20161227C_20161228C_20170109	WMWGORLF_1061
AW28928	20161227C_20161228C_20170109	WMWGORLF_1061
AW28929	20161227C_20161228C_20170109	WMWGORLF_1061
AW28959	20161227C_20161228C_20170109	WMWGORLF_1061
AW28960	20161227C_20161228C_20170109	WMWGORLF_1061
AW28924	20161228B_20161227B	WMWGORLF_1061

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

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes, with the exception of Lithium analyzed on 20161227C. Due to matrix issue with these samples, the samples were reanalyzed using matrix specific rinses. All CCV for Lithium were within the acceptance criteria in the reanalysis run.
- 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 exceptions:

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AW28924
Calcium	AW28926

The concentrations of these analytes in the matrix spike were less than 30 percent of the concentration of the sample, 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 without a dilution with the following exceptions: The following samples were diluted due to sample concentrations from the undiluted analysis were over the high standard of the calibration curve.



<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AW28922	Calcium	10X
AW28923	Calcium	10X
AW28925	Calcium	10X
AW28926	Calcium	10X
AW28926MS	Calcium	10X
AW28926MSD	Calcium	10X
AW28928	Calcium	10X
AW28929	Calcium	10X
AW28959	Calcium	10X
AW28924	Calcium	10X
AW28924MS	Calcium	10X
AW28924MSD	Calcium	10X

8. The raw data results include both results corrected for dilution and results not corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1061

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>
AW28922	582262	WMWGORLF_1061
AW28923	582262	WMWGORLF_1061
AW28924	582262	WMWGORLF_1061
AW28925	582262	WMWGORLF_1061
AW28926	582274	WMWGORLF_1061
AW28927	582274	WMWGORLF_1061
AW28928	582274	WMWGORLF_1061
AW28929	582274	WMWGORLF_1061
AW28959	582274	WMWGORLF_1061
AW28960	582274	WMWGORLF_1061

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.
- 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_1061

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>
AW28922	582922	WMWGORLF_1061
AW28923	582922	WMWGORLF_1061
AW28925	582922	WMWGORLF_1061
AW28926	582922	WMWGORLF_1061
AW28927	582922	WMWGORLF_1061
AW28928	582922	WMWGORLF_1061
AW28929	582922	WMWGORLF_1061
AW28959	582922	WMWGORLF_1061
AW28960	582922	WMWGORLF_1061
AW28924	582596	WMWGORLF_1061

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_1061

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>
AW28922	582295	WMWGORLF_1061
AW28923	582295	WMWGORLF_1061
AW28924	582422	WMWGORLF_1061
AW28925	582295	WMWGORLF_1061
AW28926	582422	WMWGORLF_1061
AW28927	582295	WMWGORLF_1061
AW28928	582422	WMWGORLF_1061
AW28929	582422	WMWGORLF_1061
AW28959	582422	WMWGORLF_1061
AW28960	582422	WMWGORLF_1061

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 0.5 mg 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 2.5 mg and 200 mg residue with the exception of AW28927 and AW28960 which were less than 2.5mg.

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW28922

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	J 0.00182	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	0.0114	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7		1	0.02	0.1	J 0.0929	mg/L
* Calcium, Total	HRG	12/28/2016	EPA 200.7		10	1.0	5.0	386	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	12/7/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	1/9/2017	EPA 200.7		1	0.01	0.05	0.206	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	GAS	11/28/2016	SM 2540C		1		250	2920	mg/L
* Chloride, Total	SES	12/1/2016	EPA 300.0		1	0.04	0.25	2.24	mg/L
* Fluoride, Total	SES	12/1/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	12/1/2016	EPA 300.0		20	6.0	20	1690	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, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW28922

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW28925 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0825	0.0857	0.0928	0.085 to 0.115		82.5	70 to 130	3.81	20
AW28925 Cobalt, Total	mg/L	0.00000395	0.0044	0.10	0.0902	0.0902	0.100	0.085 to 0.115		90.2	70 to 130	0.0377	20
AW28903 Calcium, Total	mg/L	-0.0358	0.22	5.00	267	271	5.61	4.25 to 5.75		68.0	70 to 130	1.53	20
AW28960 Mercury, Total by CVAA	mg/L	0.0000629	0.0005	0.004	0.00398	0.00394	0.00391	0.0034 to 0.0046		99.6	70 to 130	1.02	20
AW28925 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.102	0.0998	0.0924	0.085 to 0.115		91.3	70 to 130	2.12	20
AW28925 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0870	0.0895	0.0935	0.085 to 0.115		87.0	70 to 130	2.84	20
AW28925 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0916	0.0915	0.0883	0.085 to 0.115		91.6	70 to 130	0.0902	20
AW28925 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.0921	0.0963	0.0934	0.085 to 0.115		92.1	70 to 130	4.40	20
AW28903 Boron, Total	mg/L	-0.00259	0.044	1.00	1.09	1.09	1.02	0.85 to 1.15		104	70 to 130	0.531	20
AW28925 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.0957	0.0952	0.0961	0.085 to 0.115		95.7	70 to 130	0.449	20
AW28925 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.108	0.106	0.0955	0.085 to 0.115		108	70 to 130	2.42	20
AW28903 Lithium, Total	mg/L	0.000250	0.022	0.20	0.411	0.404	0.203	0.17 to 0.23		122	70 to 130	1.71	20
AW28925 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0838	0.0827	0.0867	0.085 to 0.115		83.8	70 to 130	1.36	20
AW28925 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.0922	0.0955	0.0940	0.085 to 0.115		92.2	70 to 130	3.44	20
AW28925 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0941	0.0949	0.0936	0.085 to 0.115		94.1	70 to 130	0.819	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, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AW28922

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW28927	Fluoride, Total	mg/L	0.000	0.3	2.00	2.08	0.000		1.8 to 2.2	104	80 to 120	0	20
AW28925	Solids, Dissolved	mg/L	1.00	25			4490	51.0	40 to 60			2.16	5
AW28927	Chloride, Total	mg/L	0.000	0.25	10.00	10.3	0.000	9.90	9 to 11	103	80 to 120	0	20
AW28927	Sulfate, Total	mg/L	-0.657	1.0	20.00	20.7	-0.463	20.0	18 to 22	104	80 to 120	0	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW28923

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	0.0219	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7		1	0.02	0.1	0.182	mg/L
* Calcium, Total	HRG	12/28/2016	EPA 200.7		10	1.0	5.0	179	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	0.0109	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	12/7/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	1/9/2017	EPA 200.7		1	0.01	0.05	0.236	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	GAS	11/28/2016	SM 2540C		1		100	1390	mg/L
* Chloride, Total	SES	12/1/2016	EPA 300.0		1	0.04	0.25	1.62	mg/L
* Fluoride, Total	SES	12/1/2016	EPA 300.0		1	0.01	0.3	J 0.056	mg/L
* Sulfate, Total	SES	12/1/2016	EPA 300.0		20	6.0	20	834	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW28923

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW28925 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0825	0.0857	0.0928	0.085 to 0.115	82.5	70 to 130	3.81	20	
AW28925 Cobalt, Total	mg/L	0.00000395	0.0044	0.10	0.0902	0.0902	0.100	0.085 to 0.115	90.2	70 to 130	0.0377	20	
AW28903 Lithium, Total	mg/L	0.000250	0.022	0.20	0.411	0.404	0.203	0.17 to 0.23	122	70 to 130	1.71	20	
AW28925 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0838	0.0827	0.0867	0.085 to 0.115	83.8	70 to 130	1.36	20	
AW28925 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.0922	0.0955	0.0940	0.085 to 0.115	92.2	70 to 130	3.44	20	
AW28925 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0941	0.0949	0.0936	0.085 to 0.115	94.1	70 to 130	0.819	20	
AW28925 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.102	0.0998	0.0924	0.085 to 0.115	91.3	70 to 130	2.12	20	
AW28925 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0870	0.0895	0.0935	0.085 to 0.115	87.0	70 to 130	2.84	20	
AW28925 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0916	0.0915	0.0883	0.085 to 0.115	91.6	70 to 130	0.0902	20	
AW28925 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.0921	0.0963	0.0934	0.085 to 0.115	92.1	70 to 130	4.40	20	
AW28903 Boron, Total	mg/L	-0.00259	0.044	1.00	1.09	1.09	1.02	0.85 to 1.15	104	70 to 130	0.531	20	
AW28925 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.0957	0.0952	0.0961	0.085 to 0.115	95.7	70 to 130	0.449	20	
AW28925 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.108	0.106	0.0955	0.085 to 0.115	108	70 to 130	2.42	20	
AW28903 Calcium, Total	mg/L	-0.0358	0.22	5.00	267	271	5.61	4.25 to 5.75	68.0	70 to 130	1.53	20	
AW28960 Mercury, Total by CVAA	mg/L	0.0000629	0.0005	0.004	0.00398	0.00394	0.00391	0.0034 to 0.0046	99.6	70 to 130	1.02	20	

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AW28923

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec Rec	Rec Limit	Prec	Prec Limit
AW28925	Solids, Dissolved	mg/L	1.00	25			4490	51.0	40 to 60			2.16	5
AW28927	Sulfate, Total	mg/L	-0.657	1.0	20.00	20.7	-0.463	20.0	18 to 22	104	80 to 120	0	20
AW28927	Fluoride, Total	mg/L	0.000	0.3	2.00	2.08	0.000		1.8 to 2.2	104	80 to 120	0	20
AW28927	Chloride, Total	mg/L	0.000	0.25	10.00	10.3	0.000	9.90	9 to 11	103	80 to 120	0	20

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Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW28924

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	0.0106	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7		1	0.02	0.1	J 0.0458	mg/L
* Calcium, Total	HRG	12/28/2016	EPA 200.7		10	1.0	5.0	320	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	11/30/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	12/27/2016	EPA 200.7		1	0.01	0.05	J 0.0477	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	GAS	11/29/2016	SM 2540C		1		250	4230	mg/L
* Chloride, Total	SES	11/30/2016	EPA 300.0		1	0.04	0.25	2.39	mg/L
* Fluoride, Total	SES	11/30/2016	EPA 300.0		1	0.01	0.3	J 0.192	mg/L
* Sulfate, Total	SES	12/1/2016	EPA 300.0		50	15.0	50	2720	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of range.
 The spike amount is less than 30% the sample amount. SGC 1/4/17

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW28924

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW28925 Cobalt, Total	mg/L	0.0000395	0.0044	0.10	0.0902	0.0902	0.100	0.085 to 0.115	90.2	70 to 130	0.0377	20	
AW28925 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0916	0.0915	0.0883	0.085 to 0.115	91.6	70 to 130	0.0902	20	
AW28925 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.0921	0.0963	0.0934	0.085 to 0.115	92.1	70 to 130	4.40	20	
AW28924 Boron, Total	mg/L	-0.00331	0.044	1.00	1.08	1.08	1.01	0.85 to 1.15	103	70 to 130	0.391	20	
AW28924 Calcium, Total	mg/L	-0.0398	0.22	5.00	328	345	5.33	4.25 to 5.75	171	70 to 130	5.07	20	
AW28925 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0825	0.0857	0.0928	0.085 to 0.115	82.5	70 to 130	3.81	20	
AW28925 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.102	0.0998	0.0924	0.085 to 0.115	91.3	70 to 130	2.12	20	
AW28925 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0870	0.0895	0.0935	0.085 to 0.115	87.0	70 to 130	2.84	20	
AW28924 Lithium, Total	mg/L	0.0000193	0.022	0.20	0.286	0.291	0.221	0.17 to 0.23	119	70 to 130	1.65	20	
AW28924 Mercury, Total by CVAA	mg/L	0.0000776	0.0005	0.004	0.00396	0.00404	0.004032	0.0034 to 0.0046	99.0	70 to 130	1.84	20	
AW28925 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.0957	0.0952	0.0961	0.085 to 0.115	95.7	70 to 130	0.449	20	
AW28925 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.108	0.106	0.0955	0.085 to 0.115	108	70 to 130	2.42	20	
AW28925 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0838	0.0827	0.0867	0.085 to 0.115	83.8	70 to 130	1.36	20	
AW28925 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.0922	0.0955	0.0940	0.085 to 0.115	92.2	70 to 130	3.44	20	
AW28925 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0941	0.0949	0.0936	0.085 to 0.115	94.1	70 to 130	0.819	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of range.
 The spike amount is less than 30% the sample amount. SGC 1/4/17

Alabama Power General Test Laboratory
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Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AW28924

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec Rec	Rec Limit	Prec	Prec Limit
AW28927	Fluoride, Total	mg/L	0.000	0.3	2.00	2.08	0.000		1.8 to 2.2	104	80 to 120	0	20
AW28927	Chloride, Total	mg/L	0.000	0.25	10.00	10.3	0.000	9.90	9 to 11	103	80 to 120	0	20
AW28927	Sulfate, Total	mg/L	-0.657	1.0	20.00	20.7	-0.463	20.0	18 to 22	104	80 to 120	0	20
AW28960	Solids, Dissolved	mg/L	-1.0	25			0.0	50	40 to 60			0	5

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of range.
 The spike amount is less than 30% the sample amount. SGC 1/4/17

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-4 Dup

Laboratory ID Number: AW28925

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	0.0106	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7		1	0.02	0.1	J 0.0471	mg/L
* Calcium, Total	HRG	12/28/2016	EPA 200.7		10	1.0	5.0	335	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	12/7/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	1/9/2017	EPA 200.7		1	0.01	0.05	J 0.0485	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	GAS	11/28/2016	SM 2540C		1		250	4300	mg/L
* Chloride, Total	SES	12/1/2016	EPA 300.0		1	0.04	0.25	2.08	mg/L
* Fluoride, Total	SES	12/1/2016	EPA 300.0		1	0.01	0.3	J 0.184	mg/L
* Sulfate, Total	SES	12/1/2016	EPA 300.0		50	15.0	50	2660	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, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-4 Dup

Laboratory ID Number: AW28925

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec Limit
			Limit	Spike				Limit	Rec	Limit	Prec	
AW28925 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0825	0.0857	0.0928	0.085 to 0.115	82.5	70 to 130	3.81	20
AW28925 Cobalt, Total	mg/L	0.00000395	0.0044	0.10	0.0902	0.0902	0.100	0.085 to 0.115	90.2	70 to 130	0.0377	20
AW28925 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.102	0.0998	0.0924	0.085 to 0.115	91.3	70 to 130	2.12	20
AW28925 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0870	0.0895	0.0935	0.085 to 0.115	87.0	70 to 130	2.84	20
AW28903 Lithium, Total	mg/L	0.000250	0.022	0.20	0.411	0.404	0.203	0.17 to 0.23	122	70 to 130	1.71	20
AW28925 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0838	0.0827	0.0867	0.085 to 0.115	83.8	70 to 130	1.36	20
AW28925 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.0922	0.0955	0.0940	0.085 to 0.115	92.2	70 to 130	3.44	20
AW28925 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0941	0.0949	0.0936	0.085 to 0.115	94.1	70 to 130	0.819	20
AW28925 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0916	0.0915	0.0883	0.085 to 0.115	91.6	70 to 130	0.0902	20
AW28925 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.0921	0.0963	0.0934	0.085 to 0.115	92.1	70 to 130	4.40	20
AW28903 Boron, Total	mg/L	-0.00259	0.044	1.00	1.09	1.09	1.02	0.85 to 1.15	104	70 to 130	0.531	20
AW28925 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.0957	0.0952	0.0961	0.085 to 0.115	95.7	70 to 130	0.449	20
AW28925 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.108	0.106	0.0955	0.085 to 0.115	108	70 to 130	2.42	20
AW28903 Calcium, Total	mg/L	-0.0358	0.22	5.00	267	271	5.61	4.25 to 5.75	68.0	70 to 130	1.53	20
AW28960 Mercury, Total by CVAA	mg/L	0.0000629	0.0005	0.004	0.00398	0.00394	0.00391	0.0034 to 0.0046	99.6	70 to 130	1.02	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-4 Dup

Laboratory ID Number: AW28925

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
								Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AW28927	Sulfate, Total	mg/L	-0.657	1.0	20.00	20.7	-0.463	20.0	18 to 22	104	80 to 120	0	20	
AW28927	Chloride, Total	mg/L	0.000	0.25	10.00	10.3	0.000	9.90	9 to 11	103	80 to 120	0	20	
AW28925	Solids, Dissolved	mg/L	1.00	25			4490	51.0	40 to 60			2.16	5	
AW28927	Fluoride, Total	mg/L	0.000	0.3	2.00	2.08	0.000		1.8 to 2.2	104	80 to 120	0	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW28926

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	J 0.00833	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	0.00689	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7		1	0.02	0.1	J 0.0406	mg/L
* Calcium, Total	HRG	12/28/2016	EPA 200.7		10	1.0	5.0	263	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8		5	0.0002	0.0010	0.00171	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	0.241	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	12/7/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	1/9/2017	EPA 200.7		1	0.01	0.05	0.167	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	GAS	11/29/2016	SM 2540C		1		250	3090	mg/L
* Chloride, Total	SES	11/30/2016	EPA 300.0		1	0.04	0.25	1.38	mg/L
* Fluoride, Total	SES	11/30/2016	EPA 300.0		1	0.01	0.3	J 0.244	mg/L
* Sulfate, Total	SES	12/1/2016	EPA 300.0		50	15.0	50	2060	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of range.
 The spike amount is less than 30% the sample amount. SGC 1/4/17

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW28926

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW28960 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.1000	0.0986	0.0924	0.085 to 0.115		100	70 to 130	1.37	20
AW28960 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0874	0.0867	0.0867	0.085 to 0.115		87.4	70 to 130	0.729	20
AW28926 Lithium, Total	mg/L	0.000250	0.022	0.20	0.411	0.404	0.203	0.17 to 0.23		122	70 to 130	1.72	20
AW28960 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0961	0.0962	0.0883	0.085 to 0.115		96.1	70 to 130	0.113	20
AW28960 Cobalt, Total	mg/L	0.00000395	0.0044	0.10	0.0966	0.0963	0.100	0.085 to 0.115		96.6	70 to 130	0.292	20
AW28960 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0966	0.0979	0.0935	0.085 to 0.115		96.6	70 to 130	1.31	20
AW28960 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.108	0.110	0.0934	0.085 to 0.115		108	70 to 130	2.38	20
AW28960 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.104	0.103	0.0961	0.085 to 0.115		104	70 to 130	0.458	20
AW28960 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.102	0.103	0.0940	0.085 to 0.115		102	70 to 130	1.15	20
AW28960 Mercury, Total by CVAA	mg/L	0.0000629	0.0005	0.004	0.00398	0.00394	0.00391	0.0034 to 0.0046		99.6	70 to 130	1.02	20
AW28960 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0956	0.0951	0.0936	0.085 to 0.115		95.6	70 to 130	0.513	20
AW28926 Calcium, Total	mg/L	-0.0358	0.22	5.00	267	271	5.61	4.25 to 5.75		68.0	70 to 130	1.53	20
AW28960 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0952	0.0949	0.0928	0.085 to 0.115		95.2	70 to 130	0.351	20
AW28926 Boron, Total	mg/L	-0.00259	0.044	1.00	1.09	1.09	1.02	0.85 to 1.15		104	70 to 130	0.531	20
AW28960 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.111	0.107	0.0955	0.085 to 0.115		111	70 to 130	3.33	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of range.
 The spike amount is less than 30% the sample amount. SGC 1/4/17

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AW28926

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW28927	Chloride, Total	mg/L	0.000	0.25	10.00	10.3	0.000	9.90	9 to 11	103	80 to 120	0	20
AW28927	Fluoride, Total	mg/L	0.000	0.3	2.00	2.08	0.000		1.8 to 2.2	104	80 to 120	0	20
AW28927	Sulfate, Total	mg/L	-0.657	1.0	20.00	20.7	-0.463	20.0	18 to 22	104	80 to 120	0	20
AW28960	Solids, Dissolved	mg/L	-1.0	25			0.0	50	40 to 60			0	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of range.
 The spike amount is less than 30% the sample amount. SGC 1/4/17

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
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW28927

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7		1	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	12/27/2016	EPA 200.7		1	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	12/7/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	1/9/2017	EPA 200.7		1	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	GAS	11/28/2016	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	12/1/2016	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	12/1/2016	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	12/1/2016	EPA 300.0		1	0.3	1	U Not Detected	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW28927

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW28960 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0874	0.0867	0.0867	0.085 to 0.115	87.4	70 to 130	0.729	20	
AW28960 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0952	0.0949	0.0928	0.085 to 0.115	95.2	70 to 130	0.351	20	
AW28903 Boron, Total	mg/L	-0.00259	0.044	1.00	1.09	1.09	1.02	0.85 to 1.15	104	70 to 130	0.531	20	
AW28960 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.1000	0.0986	0.0924	0.085 to 0.115	100	70 to 130	1.37	20	
AW28960 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.111	0.107	0.0955	0.085 to 0.115	111	70 to 130	3.33	20	
AW28903 Lithium, Total	mg/L	0.000250	0.022	0.20	0.411	0.404	0.203	0.17 to 0.23	122	70 to 130	1.71	20	
AW28960 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0966	0.0979	0.0935	0.085 to 0.115	96.6	70 to 130	1.31	20	
AW28960 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.108	0.110	0.0934	0.085 to 0.115	108	70 to 130	2.38	20	
AW28960 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0961	0.0962	0.0883	0.085 to 0.115	96.1	70 to 130	0.113	20	
AW28960 Cobalt, Total	mg/L	0.00000395	0.0044	0.10	0.0966	0.0963	0.100	0.085 to 0.115	96.6	70 to 130	0.292	20	
AW28903 Calcium, Total	mg/L	-0.0358	0.22	5.00	267	271	5.61	4.25 to 5.75	68.0	70 to 130	1.53	20	
AW28960 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.104	0.103	0.0961	0.085 to 0.115	104	70 to 130	0.458	20	
AW28960 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.102	0.103	0.0940	0.085 to 0.115	102	70 to 130	1.15	20	
AW28960 Mercury, Total by CVAA	mg/L	0.0000629	0.0005	0.004	0.00398	0.00394	0.00391	0.0034 to 0.0046	99.6	70 to 130	1.02	20	
AW28960 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0956	0.0951	0.0936	0.085 to 0.115	95.6	70 to 130	0.513	20	

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AW28927

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec Rec	Rec Limit	Prec	Prec Limit
AW28925	Solids, Dissolved	mg/L	1.00	25			4490	51.0	40 to 60			2.16	5
AW28927	Sulfate, Total	mg/L	-0.657	1.0	20.00	20.7	-0.463	20.0	18 to 22	104	80 to 120	0	20
AW28927	Fluoride, Total	mg/L	0.000	0.3	2.00	2.08	0.000		1.8 to 2.2	104	80 to 120	0	20
AW28927	Chloride, Total	mg/L	0.000	0.25	10.00	10.3	0.000	9.90	9 to 11	103	80 to 120	0	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW28928

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Radiological											
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320			1				Attached	
Metals, Cyanide, Total Phenols											
* Antimony, Total	JHK	11/28/2016	EPA 200.8			5	0.00060	0.0030	U	Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8			5	0.0010	0.005	J	0.00111	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8			5	0.0020	0.010		0.0144	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8			5	0.00060	0.0030	U	Not Detected	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7			1	0.02	0.1	J	0.0350	mg/L
* Calcium, Total	HRG	12/28/2016	EPA 200.7			10	1.0	5.0		179	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8			5	0.0002	0.0010	U	Not Detected	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8			5	0.0020	0.010		0.0857	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8			5	0.0020	0.010	U	Not Detected	mg/L
* Mercury, Total by CVAA	MCW	12/7/2016	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	1/9/2017	EPA 200.7			1	0.01	0.05		0.0667	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8			5	0.0020	0.010	U	Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8			5	0.0020	0.010	U	Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8			5	0.00020	0.0010	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	GAS	11/29/2016	SM 2540C			1		100		1740	mg/L
* Chloride, Total	SES	11/30/2016	EPA 300.0			1	0.04	0.25		3.34	mg/L
* Fluoride, Total	SES	11/30/2016	EPA 300.0			1	0.01	0.3	J	0.027	mg/L
* Sulfate, Total	SES	12/1/2016	EPA 300.0			20	6.0	20		1100	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW28928

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW28960 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0874	0.0867	0.0867	0.085 to 0.115	87.4	70 to 130	0.729	20	
AW28960 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.1000	0.0986	0.0924	0.085 to 0.115	100	70 to 130	1.37	20	
AW28926 Calcium, Total	mg/L	-0.0358	0.22	5.00	267	271	5.61	4.25 to 5.75	68.0	70 to 130	1.53	20	
AW28960 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0952	0.0949	0.0928	0.085 to 0.115	95.2	70 to 130	0.351	20	
AW28960 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0966	0.0979	0.0935	0.085 to 0.115	96.6	70 to 130	1.31	20	
AW28960 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.108	0.110	0.0934	0.085 to 0.115	108	70 to 130	2.38	20	
AW28926 Lithium, Total	mg/L	0.000250	0.022	0.20	0.411	0.404	0.203	0.17 to 0.23	122	70 to 130	1.72	20	
AW28960 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0961	0.0962	0.0883	0.085 to 0.115	96.1	70 to 130	0.113	20	
AW28960 Cobalt, Total	mg/L	0.00000395	0.0044	0.10	0.0966	0.0963	0.100	0.085 to 0.115	96.6	70 to 130	0.292	20	
AW28960 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.104	0.103	0.0961	0.085 to 0.115	104	70 to 130	0.458	20	
AW28960 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.102	0.103	0.0940	0.085 to 0.115	102	70 to 130	1.15	20	
AW28960 Mercury, Total by CVAA	mg/L	0.0000629	0.0005	0.004	0.00398	0.00394	0.00391	0.0034 to 0.0046	99.6	70 to 130	1.02	20	
AW28960 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0956	0.0951	0.0936	0.085 to 0.115	95.6	70 to 130	0.513	20	
AW28926 Boron, Total	mg/L	-0.00259	0.044	1.00	1.09	1.09	1.02	0.85 to 1.15	104	70 to 130	0.531	20	
AW28960 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.111	0.107	0.0955	0.085 to 0.115	111	70 to 130	3.33	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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AW28928

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW28927	Fluoride, Total	mg/L	0.000	0.3	2.00	2.08	0.000		1.8 to 2.2	104	80 to 120	0	20
AW28927	Chloride, Total	mg/L	0.000	0.25	10.00	10.3	0.000	9.90	9 to 11	103	80 to 120	0	20
AW28927	Sulfate, Total	mg/L	-0.657	1.0	20.00	20.7	-0.463	20.0	18 to 22	104	80 to 120	0	20
AW28960	Solids, Dissolved	mg/L	-1.0	25			0.0	50	40 to 60			0	5

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Laboratory certification ID: E571114

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Expiration: June 30, 2017

Comments:

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Alabama Power General Test Laboratory
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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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW28929

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	J 0.00879	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7		1	0.02	0.1	J 0.0202	mg/L
* Calcium, Total	HRG	12/28/2016	EPA 200.7		10	1.0	5.0	144	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8		5	0.0002	0.0010	0.00197	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	0.0569	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	12/7/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	1/9/2017	EPA 200.7		1	0.01	0.05	J 0.0236	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	GAS	11/29/2016	SM 2540C		1		100	2070	mg/L
* Chloride, Total	SES	11/30/2016	EPA 300.0		1	0.04	0.25	2.50	mg/L
* Fluoride, Total	SES	11/30/2016	EPA 300.0		1	0.01	0.3	J 0.047	mg/L
* Sulfate, Total	SES	12/2/2016	EPA 300.0		20	6.0	20	1420	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW28929

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW28960 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.1000	0.0986	0.0924	0.085 to 0.115	100	70 to 130	1.37	20	
AW28960 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0874	0.0867	0.0867	0.085 to 0.115	87.4	70 to 130	0.729	20	
AW28926 Calcium, Total	mg/L	-0.0358	0.22	5.00	267	271	5.61	4.25 to 5.75	68.0	70 to 130	1.53	20	
AW28960 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0952	0.0949	0.0928	0.085 to 0.115	95.2	70 to 130	0.351	20	
AW28926 Boron, Total	mg/L	-0.00259	0.044	1.00	1.09	1.09	1.02	0.85 to 1.15	104	70 to 130	0.531	20	
AW28960 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.111	0.107	0.0955	0.085 to 0.115	111	70 to 130	3.33	20	
AW28926 Lithium, Total	mg/L	0.000250	0.022	0.20	0.411	0.404	0.203	0.17 to 0.23	122	70 to 130	1.72	20	
AW28960 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0961	0.0962	0.0883	0.085 to 0.115	96.1	70 to 130	0.113	20	
AW28960 Cobalt, Total	mg/L	0.00000395	0.0044	0.10	0.0966	0.0963	0.100	0.085 to 0.115	96.6	70 to 130	0.292	20	
AW28960 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0966	0.0979	0.0935	0.085 to 0.115	96.6	70 to 130	1.31	20	
AW28960 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.108	0.110	0.0934	0.085 to 0.115	108	70 to 130	2.38	20	
AW28960 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.104	0.103	0.0961	0.085 to 0.115	104	70 to 130	0.458	20	
AW28960 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.102	0.103	0.0940	0.085 to 0.115	102	70 to 130	1.15	20	
AW28960 Mercury, Total by CVAA	mg/L	0.0000629	0.0005	0.004	0.00398	0.00394	0.00391	0.0034 to 0.0046	99.6	70 to 130	1.02	20	
AW28960 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0956	0.0951	0.0936	0.085 to 0.115	95.6	70 to 130	0.513	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 21-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AW28929

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW28927	Chloride, Total	mg/L	0.000	0.25	10.00	10.3	0.000	9.90	9 to 11	103	80 to 120	0	20
AW28927	Fluoride, Total	mg/L	0.000	0.3	2.00	2.08	0.000		1.8 to 2.2	104	80 to 120	0	20
AW28927	Sulfate, Total	mg/L	-0.657	1.0	20.00	20.7	-0.463	20.0	18 to 22	104	80 to 120	0	20
AW28960	Solids, Dissolved	mg/L	-1.0	25			0.0	50	40 to 60			0	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

CC:

Alabama Power General Test Laboratory
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 FAX (205) 257-1654

Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW28959

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	0.0487	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	0.0118	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7		1	0.02	0.1	0.197	mg/L
* Calcium, Total	HRG	12/28/2016	EPA 200.7		10	1.0	5.0	342	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	0.0453	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	12/7/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	1/9/2017	EPA 200.7		1	0.01	0.05	0.0828	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	GAS	11/29/2016	SM 2540C		1		250	3400	mg/L
* Chloride, Total	SES	12/1/2016	EPA 300.0		1	0.04	0.25	3.98	mg/L
* Fluoride, Total	SES	12/1/2016	EPA 300.0		1	0.01	0.3	J 0.012	mg/L
* Sulfate, Total	SES	12/1/2016	EPA 300.0		50	15.0	50	2220	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW28959

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW28960 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0952	0.0949	0.0928	0.085 to 0.115	95.2	70 to 130	0.351	20	
AW28960 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0874	0.0867	0.0867	0.085 to 0.115	87.4	70 to 130	0.729	20	
AW28903 Boron, Total	mg/L	-0.00259	0.044	1.00	1.09	1.09	1.02	0.85 to 1.15	104	70 to 130	0.531	20	
AW28960 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.1000	0.0986	0.0924	0.085 to 0.115	100	70 to 130	1.37	20	
AW28960 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.111	0.107	0.0955	0.085 to 0.115	111	70 to 130	3.33	20	
AW28960 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0961	0.0962	0.0883	0.085 to 0.115	96.1	70 to 130	0.113	20	
AW28960 Cobalt, Total	mg/L	0.00000395	0.0044	0.10	0.0966	0.0963	0.100	0.085 to 0.115	96.6	70 to 130	0.292	20	
AW28903 Lithium, Total	mg/L	0.000250	0.022	0.20	0.411	0.404	0.203	0.17 to 0.23	122	70 to 130	1.71	20	
AW28960 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0966	0.0979	0.0935	0.085 to 0.115	96.6	70 to 130	1.31	20	
AW28960 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.108	0.110	0.0934	0.085 to 0.115	108	70 to 130	2.38	20	
AW28903 Calcium, Total	mg/L	-0.0358	0.22	5.00	267	271	5.61	4.25 to 5.75	68.0	70 to 130	1.53	20	
AW28960 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.104	0.103	0.0961	0.085 to 0.115	104	70 to 130	0.458	20	
AW28960 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.102	0.103	0.0940	0.085 to 0.115	102	70 to 130	1.15	20	
AW28960 Mercury, Total by CVAA	mg/L	0.0000629	0.0005	0.004	0.00398	0.00394	0.00391	0.0034 to 0.0046	99.6	70 to 130	1.02	20	
AW28960 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0956	0.0951	0.0936	0.085 to 0.115	95.6	70 to 130	0.513	20	

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 22-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AW28959

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AW28927	Chloride, Total	mg/L	0.000	0.25	10.00	10.3	0.000	9.90	9 to 11	103	80 to 120	0	20
AW28927	Fluoride, Total	mg/L	0.000	0.3	2.00	2.08	0.000		1.8 to 2.2	104	80 to 120	0	20
AW28927	Sulfate, Total	mg/L	-0.657	1.0	20.00	20.7	-0.463	20.0	18 to 22	104	80 to 120	0	20
AW28960	Solids, Dissolved	mg/L	-1.0	25			0.0	50	40 to 60			0	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

CC:

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

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 22-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW28960

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/16/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Beryllium, Total	JHK	11/28/2016	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	12/27/2016	EPA 200.7		1	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	12/27/2016	EPA 200.7		1	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	11/28/2016	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	12/7/2016	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	1/9/2017	EPA 200.7		1	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	11/28/2016	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	11/28/2016	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	11/28/2016	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	GAS	11/29/2016	SM 2540C		1		25	U Not Detected	mg/L

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Laboratory certification ID: E571114

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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
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 22-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW28960

Sample Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AW28960 Lead, Total	mg/L	0.0000255	0.0022	0.10	0.0952	0.0949	0.0928	0.085 to 0.115	95.2	70 to 130	0.351	20	
AW28960 Cadmium, Total	mg/L	0.00000244	0.00044	0.10	0.111	0.107	0.0955	0.085 to 0.115	111	70 to 130	3.33	20	
AW28960 Antimony, Total	mg/L	0.0000542	0.00132	0.10	0.0874	0.0867	0.0867	0.085 to 0.115	87.4	70 to 130	0.729	20	
AW28903 Boron, Total	mg/L	-0.00259	0.044	1.00	1.09	1.09	1.02	0.85 to 1.15	104	70 to 130	0.531	20	
AW28960 Barium, Total	mg/L	0.00000899	0.0044	0.10	0.1000	0.0986	0.0924	0.085 to 0.115	100	70 to 130	1.37	20	
AW28960 Chromium, Total	mg/L	0.0000145	0.0044	0.10	0.0961	0.0962	0.0883	0.085 to 0.115	96.1	70 to 130	0.113	20	
AW28960 Cobalt, Total	mg/L	0.00000395	0.0044	0.10	0.0966	0.0963	0.100	0.085 to 0.115	96.6	70 to 130	0.292	20	
AW28903 Lithium, Total	mg/L	0.000250	0.022	0.20	0.411	0.404	0.203	0.17 to 0.23	122	70 to 130	1.71	20	
AW28960 Selenium, Total	mg/L	0.00000567	0.0044	0.10	0.0966	0.0979	0.0935	0.085 to 0.115	96.6	70 to 130	1.31	20	
AW28960 Thallium, Total	mg/L	0.0000286	0.00044	0.10	0.108	0.110	0.0934	0.085 to 0.115	108	70 to 130	2.38	20	
AW28903 Calcium, Total	mg/L	-0.0358	0.22	5.00	267	271	5.61	4.25 to 5.75	68.0	70 to 130	1.53	20	
AW28960 Arsenic, Total	mg/L	0.00000676	0.0022	0.10	0.104	0.103	0.0961	0.085 to 0.115	104	70 to 130	0.458	20	
AW28960 Beryllium, Total	mg/L	0.0000458	0.00132	0.10	0.102	0.103	0.0940	0.085 to 0.115	102	70 to 130	1.15	20	
AW28960 Mercury, Total by CVAA	mg/L	0.0000629	0.0005	0.004	0.00398	0.00394	0.00391	0.0034 to 0.0046	99.6	70 to 130	1.02	20	
AW28960 Molybdenum, Total	mg/L	0.0000114	0.0044	0.10	0.0956	0.0951	0.0936	0.085 to 0.115	95.6	70 to 130	0.513	20	

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 22-Nov-16
 Customer ID:
 Delivery Date: 22-Nov-16

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AW28960

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AW28960	Solids, Dissolved	mg/L	-1.0	25			0.0	50	40 to 60	0	5

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 11/22/2016 13:45

Requested Complete Date	<input type="text" value="Routine"/>	Results To	<input type="text" value="Dustin Brooks, John Pugh, Greg Dyer"/>
Site Representative	<input type="text" value="Che George"/>	Requested By	<input type="text" value="Greg Dyer"/>
Collector	<input type="text" value="Jason Rouss"/>	Location	<input type="text" value="Gorgas Landfill"/>
Analysis Requested	<input type="text" value="Bottle 1: Radium 226 & 228 (1) 1L bottle, Bottle 2: Metals and Hg (1) 500 mL bottle, Bottle 3: TDS and Anions (1) 500 mL bottle"/>		
Comments	<input type="text"/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-12	11/22/2016	11:15	3	Groundwater		AW28959
EB-1	11/22/2016	11:50	3	Equipment Blank		AW28960

Relinquished By	Received By	Date/Time
	Sarah Copeland <small>Digitally signed by Sarah Copeland Date: 2016.11.22 14:29:48 -06'00'</small>	11/22/2016 14:29

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="4677-23342-4-1"/>	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="5521-28269-20-13"/>

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: 400-130978-2

TestAmerica Sample Delivery Group: Gorgas Landfill (5)

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:

1/31/2017 11:25:13 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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results through

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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: 400-130978-2
SDG: Gorgas Landfill (5)

Job ID: 400-130978-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-130978-2

RAD

Method(s) 9315: Radium-226 Prep Batch 160-284103: The Laboratory Control Sample (LCS) spike recovery (167%) associated with the following samples is outside the upper QC limit of 137% indicating a potential positive bias for that analyte : AW28902 MW-4 (400-130978-1), AW28903 MW-3 (400-130978-2), AW28904 MW-2 (400-130978-3), AW28905 MW-1 (400-130978-4), (LCS 160-284103/2-A), (MB 160-284103/1-A), (400-130978-A-5-B) and (400-130978-B-5-B DU). This analyte was not observed above the requested limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The data have been qualified and reported.

Method(s) PrecSep_0: Radium-228 Prep Batch 160-283754: The following samples were prepared at a reduced aliquot due to limited volume: AW28922 MW-11 (400-130978-11), AW28922 MW-11 (400-130978-11[DU]), AW28923 MW-10 (400-130978-12), AW28925 MW-4 DUP (400-130978-13), AW28927 FB-1 (400-130978-14), AW28959 MW-12 (400-130978-15) and AW28960 EB-1 (400-130978-16).

Method(s) PrecSep_0: Radium-228 prep batch 160-284104: Only 1L was sent for each of the following samples. The samples were weighed at a reduced aliquot which should not affect the RL. AW28902 MW-4 (400-130978-1), AW28903 MW-3 (400-130978-2), AW28904 MW-2 (400-130978-3) and AW28905 MW-1 (400-130978-4)

Method(s) PrecSep-21: Radium-226 Prep Batch 160-283746: The following samples were prepared at a reduced aliquot due to limited volume: AW28922 MW-11 (400-130978-11), AW28922 MW-11 (400-130978-11[DU]), AW28923 MW-10 (400-130978-12), AW28925 MW-4 DUP (400-130978-13), AW28927 FB-1 (400-130978-14), AW28959 MW-12 (400-130978-15) and AW28960 EB-1 (400-130978-16).

Method(s) PrecSep-21: Radium-226 prep batch 160-284103: Only 1L was sent for each of the following samples. The samples were weighed at a reduced aliquot which should not affect the RL. AW28902 MW-4 (400-130978-1), AW28903 MW-3 (400-130978-2), AW28904 MW-2 (400-130978-3) and AW28905 MW-1 (400-130978-4)

Method Summary

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

TestAmerica Job ID: 400-130978-2
SDG: Gorgas Landfill (5)

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: 400-130978-2
SDG: Gorgas Landfill (5)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130978-1	AW28924 MW-4	Water	11/21/16 10:54	12/05/16 15:02
400-130978-2	AW28926 MW-3	Water	11/21/16 12:27	12/05/16 15:02
400-130978-3	AW28928 MW-2	Water	11/21/16 13:35	12/05/16 15:02
400-130978-4	AW28929 MW-1	Water	11/21/16 14:31	12/05/16 15:02
400-130978-11	AW28922 MW-11	Water	11/21/16 11:35	12/05/16 15:02
400-130978-12	AW28923 MW-10	Water	11/21/16 13:45	12/05/16 15:02
400-130978-13	AW28925 MW-4 DUP	Water	11/21/16 10:54	12/05/16 15:02
400-130978-14	AW28927 FB-1	Water	11/21/16 12:45	12/05/16 15:02
400-130978-15	AW28959 MW-12	Water	11/22/16 11:15	12/05/16 15:02
400-130978-16	AW28960 EB-1	Water	11/22/16 11:50	12/05/16 15:02

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28924 MW-4

Lab Sample ID: 400-130978-1

Date Collected: 11/21/16 10:54

Matrix: Water

Date Received: 12/05/16 15:02

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0544	U *	0.315	0.315	1.00	0.619	pCi/L	12/15/16 11:24	01/18/17 20:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.2		40 - 110					12/15/16 11:24	01/18/17 20:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.241	U	0.344	0.345	1.00	0.577	pCi/L	12/15/16 11:24	01/17/17 20:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.2		40 - 110					12/15/16 11:24	01/17/17 20:16	1
Y Carrier	92.3		40 - 110					12/15/16 11:24	01/17/17 20:16	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	0.296	U	0.467	0.467	5.00	0.619	pCi/L		01/20/17 08:52	1

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28926 MW-3

Lab Sample ID: 400-130978-2

Date Collected: 11/21/16 12:27

Matrix: Water

Date Received: 12/05/16 15:02

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.290	U	0.386	0.387	1.00	0.647	pCi/L	12/15/16 11:24	01/18/17 20:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	68.4		40 - 110					12/15/16 11:24	01/18/17 20:20	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.410	U	0.356	0.358	1.00	0.568	pCi/L	12/15/16 11:24	01/17/17 20:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	68.4		40 - 110					12/15/16 11:24	01/17/17 20:16	1
Y Carrier	96.8		40 - 110					12/15/16 11:24	01/17/17 20:16	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	0.700		0.525	0.527	5.00	0.647	pCi/L		01/20/17 08:52	1

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28928 MW-2

Lab Sample ID: 400-130978-3

Date Collected: 11/21/16 13:35

Matrix: Water

Date Received: 12/05/16 15:02

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0632	U	0.352	0.352	1.00	0.680	pCi/L	12/15/16 11:24	01/18/17 20:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		40 - 110					12/15/16 11:24	01/18/17 20:20	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.474	U	0.356	0.359	1.00	0.559	pCi/L	12/15/16 11:24	01/17/17 20:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		40 - 110					12/15/16 11:24	01/17/17 20:17	1
Y Carrier	93.1		40 - 110					12/15/16 11:24	01/17/17 20:17	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	0.537	U	0.501	0.503	5.00	0.680	pCi/L		01/20/17 08:52	1

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28929 MW-1

Lab Sample ID: 400-130978-4

Date Collected: 11/21/16 14:31

Matrix: Water

Date Received: 12/05/16 15:02

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.379	U *	0.430	0.432	1.00	0.696	pCi/L	12/15/16 11:24	01/18/17 20:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	64.1		40 - 110					12/15/16 11:24	01/18/17 20:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.428	U	0.446	0.447	1.00	0.727	pCi/L	12/15/16 11:24	01/17/17 20:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	64.1		40 - 110					12/15/16 11:24	01/17/17 20:17	1
Y Carrier	93.5		40 - 110					12/15/16 11:24	01/17/17 20:17	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	0.807		0.619	0.622	5.00	0.727	pCi/L		01/20/17 08:52	1

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28922 MW-11

Lab Sample ID: 400-130978-11

Date Collected: 11/21/16 11:35

Matrix: Water

Date Received: 12/05/16 15:02

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.482		0.161	0.167	1.00	0.162	pCi/L	12/13/16 14:15	01/04/17 10:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					12/13/16 14:15	01/04/17 10:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.708		0.365	0.371	1.00	0.540	pCi/L	12/13/16 14:48	12/19/16 16:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					12/13/16 14:48	12/19/16 16:58	1
Y Carrier	90.5		40 - 110					12/13/16 14:48	12/19/16 16:58	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	1.19		0.399	0.407	5.00	0.540	pCi/L		01/20/17 17:28	1

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28923 MW-10

Lab Sample ID: 400-130978-12

Date Collected: 11/21/16 13:45

Matrix: Water

Date Received: 12/05/16 15:02

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.121	U	0.0986	0.0992	1.00	0.143	pCi/L	12/13/16 14:15	01/04/17 10:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					12/13/16 14:15	01/04/17 10:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.368	U	0.419	0.420	1.00	0.689	pCi/L	12/13/16 14:48	12/19/16 16:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					12/13/16 14:48	12/19/16 16:59	1
Y Carrier	97.9		40 - 110					12/13/16 14:48	12/19/16 16:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.489	U	0.430	0.431	5.00	0.689	pCi/L		01/20/17 17:28	1

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28925 MW-4 DUP

Lab Sample ID: 400-130978-13

Date Collected: 11/21/16 10:54

Matrix: Water

Date Received: 12/05/16 15:02

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0880	U	0.104	0.105	1.00	0.171	pCi/L	12/13/16 14:15	01/04/17 10:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					12/13/16 14:15	01/04/17 10:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.262	U	0.288	0.289	1.00	0.472	pCi/L	12/13/16 14:48	12/19/16 16:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					12/13/16 14:48	12/19/16 16:58	1
Y Carrier	95.7		40 - 110					12/13/16 14:48	12/19/16 16:58	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	0.350	U	0.306	0.307	5.00	0.472	pCi/L		01/20/17 17:28	1

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28927 FB-1

Lab Sample ID: 400-130978-14

Date Collected: 11/21/16 12:45

Matrix: Water

Date Received: 12/05/16 15:02

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00312	U	0.0723	0.0723	1.00	0.152	pCi/L	12/13/16 14:15	01/04/17 10:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					12/13/16 14:15	01/04/17 10:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0600	U	0.303	0.303	1.00	0.550	pCi/L	12/13/16 14:48	12/19/16 16:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					12/13/16 14:48	12/19/16 16:59	1
Y Carrier	95.7		40 - 110					12/13/16 14:48	12/19/16 16:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0631	U	0.312	0.312	5.00	0.550	pCi/L		01/20/17 17:28	1

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28959 MW-12

Lab Sample ID: 400-130978-15

Date Collected: 11/22/16 11:15

Matrix: Water

Date Received: 12/05/16 15:02

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	U	0.0986	0.0993	1.00	0.141	pCi/L	12/13/16 14:15	01/04/17 10:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					12/13/16 14:15	01/04/17 10:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.452	U	0.315	0.318	1.00	0.489	pCi/L	12/13/16 14:48	12/19/16 16:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					12/13/16 14:48	12/19/16 16:59	1
Y Carrier	96.1		40 - 110					12/13/16 14:48	12/19/16 16:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.578		0.330	0.333	5.00	0.489	pCi/L		01/20/17 17:28	1

Client Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Client Sample ID: AW28960 EB-1

Lab Sample ID: 400-130978-16

Date Collected: 11/22/16 11:50

Matrix: Water

Date Received: 12/05/16 15:02

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0423	U	0.0829	0.0829	1.00	0.149	pCi/L	12/13/16 14:15	01/04/17 15:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.9		40 - 110					12/13/16 14:15	01/04/17 15:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.249	U	0.284	0.285	1.00	0.467	pCi/L	12/13/16 14:48	12/19/16 16:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.9		40 - 110					12/13/16 14:48	12/19/16 16:59	1
Y Carrier	100		40 - 110					12/13/16 14:48	12/19/16 16:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.291	U	0.296	0.297	5.00	0.467	pCi/L		01/20/17 17:28	1

Definitions/Glossary

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

TestAmerica Job ID: 400-130978-2
SDG: Gorgas Landfill (5)

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
*	LCS or LCSD is outside acceptance limits.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: 400-130978-2
SDG: Gorgas Landfill (5)

Client Sample ID: AW28924 MW-4

Date Collected: 11/21/16 10:54

Date Received: 12/05/16 15:02

Lab Sample ID: 400-130978-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			284103	12/15/16 11:24	SCB	TAL SL
Total/NA	Analysis	9315		1	288220	01/18/17 20:16	ALD	TAL SL
Total/NA	Prep	PrecSep_0			284104	12/15/16 11:24	SCB	TAL SL
Total/NA	Analysis	9320		1	287966	01/17/17 20:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288519	01/20/17 08:52	RTM	TAL SL

Client Sample ID: AW28926 MW-3

Date Collected: 11/21/16 12:27

Date Received: 12/05/16 15:02

Lab Sample ID: 400-130978-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			284103	12/15/16 11:24	SCB	TAL SL
Total/NA	Analysis	9315		1	288149	01/18/17 20:20	KLS	TAL SL
Total/NA	Prep	PrecSep_0			284104	12/15/16 11:24	SCB	TAL SL
Total/NA	Analysis	9320		1	287966	01/17/17 20:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288519	01/20/17 08:52	RTM	TAL SL

Client Sample ID: AW28928 MW-2

Date Collected: 11/21/16 13:35

Date Received: 12/05/16 15:02

Lab Sample ID: 400-130978-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			284103	12/15/16 11:24	SCB	TAL SL
Total/NA	Analysis	9315		1	288149	01/18/17 20:20	KLS	TAL SL
Total/NA	Prep	PrecSep_0			284104	12/15/16 11:24	SCB	TAL SL
Total/NA	Analysis	9320		1	287966	01/17/17 20:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288519	01/20/17 08:52	RTM	TAL SL

Client Sample ID: AW28929 MW-1

Date Collected: 11/21/16 14:31

Date Received: 12/05/16 15:02

Lab Sample ID: 400-130978-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			284103	12/15/16 11:24	SCB	TAL SL
Total/NA	Analysis	9315		1	288207	01/18/17 20:40	ALD	TAL SL
Total/NA	Prep	PrecSep_0			284104	12/15/16 11:24	SCB	TAL SL
Total/NA	Analysis	9320		1	287966	01/17/17 20:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288519	01/20/17 08:52	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-130978-2
SDG: Gorgas Landfill (5)

Client Sample ID: AW28922 MW-11

Lab Sample ID: 400-130978-11

Date Collected: 11/21/16 11:35

Matrix: Water

Date Received: 12/05/16 15:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			283746	12/13/16 14:15	AS	TAL SL
Total/NA	Analysis	9315		1	286427	01/04/17 10:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			283754	12/13/16 14:48	AS	TAL SL
Total/NA	Analysis	9320		1	284475	12/19/16 16:58	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288586	01/20/17 17:28	RTM	TAL SL

Client Sample ID: AW28923 MW-10

Lab Sample ID: 400-130978-12

Date Collected: 11/21/16 13:45

Matrix: Water

Date Received: 12/05/16 15:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			283746	12/13/16 14:15	AS	TAL SL
Total/NA	Analysis	9315		1	286427	01/04/17 10:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			283754	12/13/16 14:48	AS	TAL SL
Total/NA	Analysis	9320		1	284475	12/19/16 16:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288586	01/20/17 17:28	RTM	TAL SL

Client Sample ID: AW28925 MW-4 DUP

Lab Sample ID: 400-130978-13

Date Collected: 11/21/16 10:54

Matrix: Water

Date Received: 12/05/16 15:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			283746	12/13/16 14:15	AS	TAL SL
Total/NA	Analysis	9315		1	286427	01/04/17 10:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			283754	12/13/16 14:48	AS	TAL SL
Total/NA	Analysis	9320		1	284475	12/19/16 16:58	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288586	01/20/17 17:28	RTM	TAL SL

Client Sample ID: AW28927 FB-1

Lab Sample ID: 400-130978-14

Date Collected: 11/21/16 12:45

Matrix: Water

Date Received: 12/05/16 15:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			283746	12/13/16 14:15	AS	TAL SL
Total/NA	Analysis	9315		1	286427	01/04/17 10:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			283754	12/13/16 14:48	AS	TAL SL
Total/NA	Analysis	9320		1	284475	12/19/16 16:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288586	01/20/17 17:28	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-130978-2
SDG: Gorgas Landfill (5)

Client Sample ID: AW28959 MW-12

Lab Sample ID: 400-130978-15

Date Collected: 11/22/16 11:15

Matrix: Water

Date Received: 12/05/16 15:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			283746	12/13/16 14:15	AS	TAL SL
Total/NA	Analysis	9315		1	286427	01/04/17 10:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			283754	12/13/16 14:48	AS	TAL SL
Total/NA	Analysis	9320		1	284475	12/19/16 16:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288586	01/20/17 17:28	RTM	TAL SL

Client Sample ID: AW28960 EB-1

Lab Sample ID: 400-130978-16

Date Collected: 11/22/16 11:50

Matrix: Water

Date Received: 12/05/16 15:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			283746	12/13/16 14:15	AS	TAL SL
Total/NA	Analysis	9315		1	286428	01/04/17 15:32	ALD	TAL SL
Total/NA	Prep	PrecSep_0			283754	12/13/16 14:48	AS	TAL SL
Total/NA	Analysis	9320		1	284475	12/19/16 16:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	288586	01/20/17 17:28	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: 400-130978-2
 SDG: Gorgas Landfill (5)

Rad

Prep Batch: 283746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130978-11	AW28922 MW-11	Total/NA	Water	PrecSep-21	
400-130978-12	AW28923 MW-10	Total/NA	Water	PrecSep-21	
400-130978-13	AW28925 MW-4 DUP	Total/NA	Water	PrecSep-21	
400-130978-14	AW28927 FB-1	Total/NA	Water	PrecSep-21	
400-130978-15	AW28959 MW-12	Total/NA	Water	PrecSep-21	
400-130978-16	AW28960 EB-1	Total/NA	Water	PrecSep-21	
MB 160-283746/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-283746/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-130978-11 DU	AW28922 MW-11	Total/NA	Water	PrecSep-21	

Prep Batch: 283754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130978-11	AW28922 MW-11	Total/NA	Water	PrecSep_0	
400-130978-12	AW28923 MW-10	Total/NA	Water	PrecSep_0	
400-130978-13	AW28925 MW-4 DUP	Total/NA	Water	PrecSep_0	
400-130978-14	AW28927 FB-1	Total/NA	Water	PrecSep_0	
400-130978-15	AW28959 MW-12	Total/NA	Water	PrecSep_0	
400-130978-16	AW28960 EB-1	Total/NA	Water	PrecSep_0	
MB 160-283754/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-283754/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-130978-11 DU	AW28922 MW-11	Total/NA	Water	PrecSep_0	

Prep Batch: 284103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130978-1	AW28924 MW-4	Total/NA	Water	PrecSep-21	
400-130978-2	AW28926 MW-3	Total/NA	Water	PrecSep-21	
400-130978-3	AW28928 MW-2	Total/NA	Water	PrecSep-21	
400-130978-4	AW28929 MW-1	Total/NA	Water	PrecSep-21	
MB 160-284103/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-284103/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-130978-B-5-B DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 284104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130978-1	AW28924 MW-4	Total/NA	Water	PrecSep_0	
400-130978-2	AW28926 MW-3	Total/NA	Water	PrecSep_0	
400-130978-3	AW28928 MW-2	Total/NA	Water	PrecSep_0	
400-130978-4	AW28929 MW-1	Total/NA	Water	PrecSep_0	
MB 160-284104/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-284104/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-130978-B-5-C DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-283746/1-A
Matrix: Water
Analysis Batch: 286427

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 283746

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.02426	U	0.0634	0.0634	1.00	0.148	pCi/L	12/13/16 14:15	01/04/17 10:58	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		12/13/16 14:15	01/04/17 10:58				1	
Ba Carrier	86.9		40 - 110							

Lab Sample ID: LCS 160-283746/2-A
Matrix: Water
Analysis Batch: 286427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 283746

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	14.8	19.83		2.01	1.00	0.158	pCi/L	134	68 - 137
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	%Yield	Qualifier		12/13/16 14:15	01/04/17 10:58				1
Ba Carrier	82.9		40 - 110						

Lab Sample ID: 400-130978-11 DU
Matrix: Water
Analysis Batch: 286427

Client Sample ID: AW28922 MW-11
Prep Type: Total/NA
Prep Batch: 283746

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.482		0.4608		0.164	1.00	0.160	pCi/L	0.06	1
Carrier	DU DU		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		12/15/16 11:24	01/18/17 20:16				1	
Ba Carrier	87.7		40 - 110							

Lab Sample ID: MB 160-284103/1-A
Matrix: Water
Analysis Batch: 288220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 284103

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.2259	U	0.326	0.326	1.00	0.555	pCi/L	12/15/16 11:24	01/18/17 20:16	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		12/15/16 11:24	01/18/17 20:16				1	
Ba Carrier	84.0		40 - 110							

Lab Sample ID: LCS 160-284103/2-A
Matrix: Water
Analysis Batch: 288220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284103

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	14.8	24.78	*	2.98	1.00	0.542	pCi/L	167	68 - 137

QC Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

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

Lab Sample ID: LCS 160-284103/2-A
Matrix: Water
Analysis Batch: 288220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284103

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	81.5		40 - 110

Lab Sample ID: 400-130978-B-5-B DU
Matrix: Water
Analysis Batch: 288207

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 284103

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0782	U *	0.1314	U *	0.298	1.00	0.547	pCi/L	0.09	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	78.3		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-283754/1-A
Matrix: Water
Analysis Batch: 284475

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 283754

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.08800	U	0.295	0.295	1.00	0.513	pCi/L	12/13/16 14:48	12/19/16 16:57	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110	12/13/16 14:48	12/19/16 16:57	1
Y Carrier	97.9		40 - 110	12/13/16 14:48	12/19/16 16:57	1

Lab Sample ID: LCS 160-283754/2-A
Matrix: Water
Analysis Batch: 284475

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 283754

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	18.8	20.08		2.16	1.00	0.512	pCi/L	107	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	82.9		40 - 110
Y Carrier	98.3		40 - 110

Lab Sample ID: 400-130978-11 DU
Matrix: Water
Analysis Batch: 284475

Client Sample ID: AW28922 MW-11
Prep Type: Total/NA
Prep Batch: 283754

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.708		0.5022	U	0.355	1.00	0.549	pCi/L	0.28	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

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

Lab Sample ID: 400-130978-11 DU
Matrix: Water
Analysis Batch: 284475

Client Sample ID: AW28922 MW-11
Prep Type: Total/NA
Prep Batch: 283754

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	87.7		40 - 110
Y Carrier	93.1		40 - 110

Lab Sample ID: MB 160-284104/1-A
Matrix: Water
Analysis Batch: 287966

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 284104

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.09952	U	0.325	0.325	1.00	0.565	pCi/L	12/15/16 11:24	01/17/17 20:16	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110	12/15/16 11:24	01/17/17 20:16	1
Y Carrier	89.3		40 - 110	12/15/16 11:24	01/17/17 20:16	1

Lab Sample ID: LCS 160-284104/2-A
Matrix: Water
Analysis Batch: 287966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284104

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	18.6	18.39		2.02	1.00	0.534	pCi/L	99	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	81.5		40 - 110
Y Carrier	93.1		40 - 110

Lab Sample ID: 400-130978-B-5-C DU
Matrix: Water
Analysis Batch: 287966

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 284104

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.686		0.6040		0.394	1.00	0.602	pCi/L	0.10	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	78.3		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: 400-130978-2
 SDG: Gorgas Landfill (5)

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

Lab Sample ID: 400-130978-A-5 DU
Matrix: Water
Analysis Batch: 288519

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	0.764		0.7354		0.494	5.00	0.602	pCi/L	0.03	

Lab Sample ID: 400-130978-11 DU
Matrix: Water
Analysis Batch: 288586

Client Sample ID: AW28922 MW-11
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	1.19		0.9630		0.391	5.00	0.549	pCi/L	0.29	

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

Chain of Custody Record



Client Information		Lab PM:		Carrier Tracking No(s):	
Sampler: Jason Rouss / Anthony Goggins 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 (5)		Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-56525-24537.1 Page: Page 1 of 1 Job #: 400-130979	
Analysis Requested		Due Date Requested:		Carriage Tracking No(s):	
Routine PO #: _____ WO #: _____ Project #: 40007143 SSOW#: _____		9315, Ra226, 9320, Ra228, R226Ra228, GFFC		9315, Ra226, 9320, Ra228, R226Ra228, GFFC	
Sample Identification		Field Filtered Sample (Yes or No)		Performance/MSD (Yes or No)	
Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, etc)	Preservation Code (E=Ethanol, A=Ascorbic, etc)
AW28922	11/21/16	1135	G	Water	Y
AW28923	11/21/16	1345	G	Water	X
AW28924	11/21/16	1054	G	Water	X
AW28925	11/21/16	1054	G	Water	X
AW28926	11/21/16	1227	G	Water	X
AW28927	11/21/16	1245	G	Water	X
AW28928	11/21/16	1335	G	Water	X
AW28929	11/22/16	1431	G	Water	X
AW28959	11/22/16	1115	G	Water	X
AW28960	11/22/16	1150	G	Water	X
Possible Hazard Identification <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: 12/05/2016; 1005 Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____					
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: Method of Shipment: _____ Cooler Temperature(s) °C and Other Remarks: _____					



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-130978-2
SDG Number: Gorgas Landfill (5)

Login Number: 130978
List Number: 1
Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	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 <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	



Certification Summary

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

TestAmerica Job ID: 400-130978-2
 SDG: Gorgas Landfill (5)

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-16 *
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	12-01-16 *
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17 *
North Dakota	State Program	8	R207	06-30-17

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 400-130978-2
SDG: Gorgas Landfill (5)

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-0016	01-09-17 *
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

* Certification renewal pending - 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_1070

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1070

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>Chloride Batch ID</u>	<u>Fluoride Batch ID</u>	<u>Sulfate Batch ID</u>	<u>Project ID</u>
AX01218	585660	585662	585664	WMWGORLF_1070
AX01219	585660	585662	585664	WMWGORLF_1070
AX01220	585660	585662	585664	WMWGORLF_1070
AX01221	585660	585662	585664	WMWGORLF_1070
AX01222	585660	585662	585664	WMWGORLF_1070
AX01258	585660	585662	585664	WMWGORLF_1070
AX01259	585660	585662	585664	WMWGORLF_1070
AX01260	585660	585662	585664	WMWGORLF_1070
AX01261	585660	585662	585664	WMWGORLF_1070
AX01262	585660	585662	585664	WMWGORLF_1070

4. All of the above samples were analyzed and prepared by EPA 300.0.
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 instrument performance check (IPC) was analyzed and all criteria were met.
- All laboratory reagent blanks were less than the method detection limits for the requested anions.
- All laboratory fortified blanks (LFB) were within acceptance criteria for the anions requested, with the following exception: no closing LFB was listed or run for the dilution re-analyses for sulfate. Due to absence of a closing LFB, the reported results for the following sample dilutions for sulfate are qualified as quantitatively estimated with indeterminate bias direction and magnitude: AX01218, AX01219, AX01220, AX01221, AX01222, AX01258, AX01260 and AX01261.
- 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 laboratory fortified matrix sample was analyzed with each batch. All acceptance criteria for accuracy were met, with the exception of Fluoride recovery for AW01262, which exceeded the upper limit of 120%, at 128%.
 - A sample duplicate and/or laboratory fortified matrix duplicate were analyzed with each batch. All acceptance criteria for precision were met. It is noted that separate and distinct criteria for duplicate precision calculations, based on sample and duplicate anion concentrations, are used to assess precision compliance. These are as follow: if the sample and duplicate are both greater than 5x anion Reporting Limit (RL) concentration, the precision is calculated and reported as relative percent difference (RPD), with an acceptance range of 0 - 20%; if either the sample or duplicate are less than 5x anion RL, the precision is calculated and reported as the absolute value of the difference between the two concentrations, with an acceptance range of less than or equal to the anion RL value.
7. Samples AX01218, AX01219, AX01220, AX01221, AX01222, AX01258, AX01260 and AX01261 were re-analyzed at a 20x dilution for sulfate, due to the undiluted results exceeding the calibrated range of the detector. The dilution results for sulfate for these samples should be used; reporting limit (RL) values are adjusted upward to reflect the dilution factor applied.

<u>Sample ID</u>		<u>Analyte</u>		<u>Dilution Factor</u>
AX01218		Sulfate		20X
AX01219		Sulfate		20X
AX01220		Sulfate		20X
AX01221		Sulfate		20X
AX01222		Sulfate		20X
AX01258		Sulfate		20X
AX01260		Sulfate		20X
AX01261		Sulfate		20X

8. The raw data results are shown with dilution factors included, when dilutions are manually performed by the analyst.
 The raw data results are shown without dilution factor corrections, when dilutions are run automatically by the instrument.



Metals ICP

Gorgas Landfill

WMWGORLF_1070

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AX01218	20170214_20170328_20170517C	WMWGORLF_1070
AX01219	20170214A_20170216B_20170330_20170330DIL_20170517D	WMWGORLF_1070
AX01220	20170214_20170328_20170517C	WMWGORLF_1070
AX01221	20170214_20170328_20170517C	WMWGORLF_1070
AX01222	20170214_20170328_20170517C	WMWGORLF_1070
AX01258	20170214A_20170216B_20170330_20170330DIL_20170517D	WMWGORLF_1070
AX01259	20170214A_20170216B_20170330_20170330DIL_20170517D	WMWGORLF_1070
AX01260	20170214A_20170216B_20170330_20170330DIL_20170517D	WMWGORLF_1070
AX01261	20170214A_20170216B_20170330_20170330DIL_20170517D	WMWGORLF_1070
AX01262	20170214A_20170216B_20170330_20170330DIL_20170517D	WMWGORLF_1070

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.
7. There was no data reported from 20170214A or 20170216B, due to sample mislabeling. All samples in these batches were re-prepared and re-analyzed.

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. The data reported from 20170328, 20170330 and 20170330DIL had an additional CCV run between each sample for monitoring possible Lithium matrix issues.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes. The data reported from 20170328, 20170517C, 20170330, 20170330DIL and 20170517D runs had an additional blank rinse between each sample to monitor potential Lithium matrix issues.
- 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, with the following exceptions:
 1. All samples in batch 20170328 had a greater than 10% high standard error for Lithium. These samples were re-analyzed and reported for Lithium in batch 20170517C with passing results.
 2. The high standard readback for AX01258 (Calcium only) in batch 20170330 failed. The sample was re-prepared, re-analyzed and reported in batch 20170517D with passing results.
- 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. Sample AX01258 was re-analyzed for Calcium without an MS or MSD, therefore does not have spike associated QC listed.

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

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AX01222
Calcium	AX01261

The concentrations of these analytes in the matrix spike were less than 30 percent of the concentration of the sample causing inaccurate spike recovery information. The laboratory control sample indicates that the digestion and analysis were in control.

<u>Analyte</u>	<u>Sample ID</u>
Lithium	AX01261

Post digestion spike and serial dilutions for AX01261 resulted in failing accuracy indicating a matrix effect on the sample.



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

8. All samples were analyzed at 2X dilution to compensate for any matrix effects with the following exceptions:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AX01218	Calcium	10X
AX01219	Calcium	10X
AX01220	Calcium	10X
AX01221	Calcium	100X
AX01222	Calcium	100X
AX01258	Calcium	100X
AX01260	Calcium	10X
AX01261	Calcium	10X
AX01261 MS	Calcium	10X
AX01261 MSD	Calcium	10X

9. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1070

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AX01218	587017	WMWGORLF_1070
AX01219	587031	WMWGORLF_1070
AX01220	587017	WMWGORLF_1070
AX01221	587017	WMWGORLF_1070
AX01222	587017	WMWGORLF_1070
AX01258	587031	WMWGORLF_1070
AX01259	587031	WMWGORLF_1070
AX01260	587031	WMWGORLF_1070
AX01261	587031	WMWGORLF_1070
AX01262	587031	WMWGORLF_1070

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, and 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_1070

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AX01218	586036	WMWGORLF_1070
AX01219	586036	WMWGORLF_1070
AX01220	586036	WMWGORLF_1070
AX01221	586036	WMWGORLF_1070
AX01222	586036	WMWGORLF_1070
AX01258	586037	WMWGORLF_1070
AX01259	586037	WMWGORLF_1070
AX01260	586037	WMWGORLF_1070
AX01261	586037	WMWGORLF_1070
AX01262	586037	WMWGORLF_1070

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_1070

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AX01218	585591	WMWGORLF_1070
AX01219	585591	WMWGORLF_1070
AX01220	585591	WMWGORLF_1070
AX01221	585591	WMWGORLF_1070
AX01222	585591	WMWGORLF_1070
AX01258	585591	WMWGORLF_1070
AX01259	585591	WMWGORLF_1070
AX01260	585591	WMWGORLF_1070
AX01261	585591	WMWGORLF_1070
AX01262	585591	WMWGORLF_1070

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 0.5 mg 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 2.5 mg and 200 mg residue with the exception of AX01262, which was less than 2.5mg.

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX01218

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	J 0.00929	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	3/28/2017	EPA 200.7		2	0.02	0.1	J 0.0201	mg/L
* Calcium, Total	HRG	3/28/2017	EPA 200.7		10	1.0	5	131	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8		5	0.0002	0.0010	0.00200	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	0.0768	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7		2	0.01	0.05	J 0.0228	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C		1		167	1930	mg/L
* Chloride, Total	SES	1/20/2017	EPA 300.0		1	0.04	0.25	2.68	mg/L
* Fluoride, Total	SES	1/20/2017	EPA 300.0		1	0.01	0.3	J 0.090	mg/L
* Sulfate, Total	SES	1/21/2017	EPA 300.0		20	6.0	20	1350	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, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX01218

Sample	Analysis	Units	MB	MB			LFB			Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	
AX01219	Mercury, Total by CVAA	mg/L	0.000110	0.0005	0.004	0.00386	0.00384	0.00381	0.0034 to 0.0046	96.4	70 to 130	0.449	20
AX01222	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0913	0.0891	0.0971	0.085 to 0.115	91.3	70 to 130	2.46	20
AX01222	Calcium, Total	mg/L	-0.00409	0.22	5.00	419	455	4.78	4.25 to 5.75	34.0	70 to 130	8.28	20
AX01222	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.104	0.102	0.0974	0.085 to 0.115	104	70 to 130	2.54	20
AX01222	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.105	0.105	0.104	0.085 to 0.115	105	70 to 130	0.0632	20
AX01222	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.114	0.113	0.110	0.085 to 0.115	114	70 to 130	1.33	20
AX01222	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.116	0.114	0.106	0.085 to 0.115	116	70 to 130	1.54	20
AX01222	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.107	0.105	0.104	0.085 to 0.115	107	70 to 130	1.52	20
AX01222	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.108	0.106	0.102	0.085 to 0.115	108	70 to 130	1.55	20
AX01222	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0986	0.0983	0.103	0.085 to 0.115	98.6	70 to 130	0.279	20
AX01222	Lithium, Total	mg/L	-0.000161	0.022	0.20	0.291	0.300	0.185	0.17 to 0.23	123	70 to 130	2.88	20
AX01222	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0982	0.0978	0.102	0.085 to 0.115	98.2	70 to 130	0.344	20
AX01222	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.102	0.101	0.0981	0.085 to 0.115	91.7	70 to 130	0.929	20
AX01222	Boron, Total	mg/L	0.000238	0.044	1.0	1.01	1.04	0.951	0.85 to 1.15	96.2	70 to 130	3.23	20
AX01222	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.107	0.106	0.103	0.085 to 0.115	107	70 to 130	0.667	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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 Calera, AL 35040
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Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX01218

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX01260	Solids, Dissolved	mg/L	-6.0	25				1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7		0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55		0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1		0.546	20.7	18 to 22	109	80 to 120	39.7	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

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CC:

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Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-1 Dup

Laboratory ID Number: AX01219

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	J 0.00936	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	3/30/2017	EPA 200.7		2	0.02	0.1	J 0.0240	mg/L
* Calcium, Total	HRG	3/30/2017	EPA 200.7		10	1.0	5	141	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8		5	0.0002	0.0010	0.00206	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	0.0785	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	3/30/2017	EPA 200.7		2	0.01	0.05	J 0.0292	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C		1		167	2030	mg/L
* Chloride, Total	SES	1/21/2017	EPA 300.0		1	0.04	0.25	2.65	mg/L
* Fluoride, Total	SES	1/21/2017	EPA 300.0		1	0.01	0.3	J 0.092	mg/L
* Sulfate, Total	SES	1/21/2017	EPA 300.0		20	6.0	20	1360	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, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-1 Dup

Laboratory ID Number: AX01219

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX01262	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.185	20
AX01262	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.116	0.105	0.110	0.085 to 0.115	116	70 to 130	9.71	20
AX01262	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0984	0.102	0.103	0.085 to 0.115	98.4	70 to 130	3.21	20
AX01219	Mercury, Total by CVAA	mg/L	0.000110	0.0005	0.004	0.00386	0.00384	0.00381	0.0034 to 0.0046	96.4	70 to 130	0.449	20
AX01262	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.108	0.108	0.106	0.085 to 0.115	108	70 to 130	0.336	20
AX01262	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.0976	0.0982	0.0974	0.085 to 0.115	97.6	70 to 130	0.572	20
AX01261	Lithium, Total	mg/L	-0.0000716	0.022	0.20	0.441	0.435	0.214	0.17 to 0.23	158	70 to 130	1.29	20
AX01262	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.0935	0.0948	0.0981	0.085 to 0.115	93.5	70 to 130	1.48	20
AX01262	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0912	0.0927	0.0971	0.085 to 0.115	91.2	70 to 130	1.71	20
AX01262	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.102	0.103	0.104	0.085 to 0.115	102	70 to 130	0.802	20
AX01261	Boron, Total	mg/L	0.000211	0.044	1.00	1.21	1.21	0.986	0.85 to 1.15	103	70 to 130	0.717	20
AX01261	Calcium, Total	mg/L	-0.00837	0.22	5.00	352	352	5.01	4.25 to 5.75	-140	70 to 130	0.00	20
AX01262	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0989	0.0988	0.102	0.085 to 0.115	98.9	70 to 130	0.0969	20
AX01262	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.624	20
AX01262	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.617	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-1 Dup

Laboratory ID Number: AX01219

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX01260	Solids, Dissolved	mg/L	-6.0	25				1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7		0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55		0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1		0.546	20.7	18 to 22	109	80 to 120	39.7	20

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report
 Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX01220

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	0.0135	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	3/28/2017	EPA 200.7		2	0.02	0.1	J 0.0259	mg/L
* Calcium, Total	HRG	3/28/2017	EPA 200.7		10	1.0	5	188	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8		5	0.0002	0.0010	J 0.000311	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	0.0745	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7		2	0.01	0.05	0.0636	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C		1		125	1960	mg/L
* Chloride, Total	SES	1/20/2017	EPA 300.0		1	0.04	0.25	3.58	mg/L
* Fluoride, Total	SES	1/20/2017	EPA 300.0		1	0.01	0.3	J 0.066	mg/L
* Sulfate, Total	SES	1/21/2017	EPA 300.0		20	6.0	20	1160	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX01220

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX01222	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0913	0.0891	0.0971	0.085 to 0.115		91.3	70 to 130	2.46	20
AX01219	Mercury, Total by CVAA	mg/L	0.000110	0.0005	0.004	0.00386	0.00384	0.00381	0.0034 to 0.0046		96.4	70 to 130	0.449	20
AX01222	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0986	0.0983	0.103	0.085 to 0.115		98.6	70 to 130	0.279	20
AX01222	Lithium, Total	mg/L	-0.000161	0.022	0.20	0.291	0.300	0.185	0.17 to 0.23		123	70 to 130	2.88	20
AX01222	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0982	0.0978	0.102	0.085 to 0.115		98.2	70 to 130	0.344	20
AX01222	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.105	0.105	0.104	0.085 to 0.115		105	70 to 130	0.0632	20
AX01222	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.114	0.113	0.110	0.085 to 0.115		114	70 to 130	1.33	20
AX01222	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.116	0.114	0.106	0.085 to 0.115		116	70 to 130	1.54	20
AX01222	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.107	0.105	0.104	0.085 to 0.115		107	70 to 130	1.52	20
AX01222	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.108	0.106	0.102	0.085 to 0.115		108	70 to 130	1.55	20
AX01222	Calcium, Total	mg/L	-0.00409	0.22	5.00	419	455	4.78	4.25 to 5.75		34.0	70 to 130	8.28	20
AX01222	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.104	0.102	0.0974	0.085 to 0.115		104	70 to 130	2.54	20
AX01222	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.102	0.101	0.0981	0.085 to 0.115		91.7	70 to 130	0.929	20
AX01222	Boron, Total	mg/L	0.000238	0.044	1.0	1.01	1.04	0.951	0.85 to 1.15		96.2	70 to 130	3.23	20
AX01222	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.107	0.106	0.103	0.085 to 0.115		107	70 to 130	0.667	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX01220

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit	Limit			Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX01260	Solids, Dissolved	mg/L	-6.0	25			1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7	0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55	0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1	0.546	20.7	18 to 22	109	80 to 120	39.7	20

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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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX01221

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	J 0.00966	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	0.0169	mg/L
* Boron, Total	HRG	3/28/2017	EPA 200.7		2	0.02	0.1	J 0.0548	mg/L
* Calcium, Total	HRG	3/28/2017	EPA 200.7		100	10.0	50	431	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8		5	0.0002	0.0010	0.00300	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	0.347	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7		2	0.01	0.05	0.237	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C		1		250	4020	mg/L
* Chloride, Total	SES	1/20/2017	EPA 300.0		1	0.04	0.25	1.34	mg/L
* Fluoride, Total	SES	1/20/2017	EPA 300.0		1	0.01	0.3	0.385	mg/L
* Sulfate, Total	SES	1/23/2017	EPA 300.0		40	12.0	40	2620	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX01221

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX01219	Mercury, Total by CVAA	mg/L	0.000110	0.0005	0.004	0.00386	0.00384	0.00381	0.0034 to 0.0046		96.4	70 to 130	0.449	20
AX01222	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0913	0.0891	0.0971	0.085 to 0.115		91.3	70 to 130	2.46	20
AX01222	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0986	0.0983	0.103	0.085 to 0.115		98.6	70 to 130	0.279	20
AX01222	Lithium, Total	mg/L	-0.000161	0.022	0.20	0.291	0.300	0.185	0.17 to 0.23		123	70 to 130	2.88	20
AX01222	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0982	0.0978	0.102	0.085 to 0.115		98.2	70 to 130	0.344	20
AX01222	Calcium, Total	mg/L	-0.00409	0.22	5.00	419	455	4.78	4.25 to 5.75		34.0	70 to 130	8.28	20
AX01222	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.104	0.102	0.0974	0.085 to 0.115		104	70 to 130	2.54	20
AX01222	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.105	0.105	0.104	0.085 to 0.115		105	70 to 130	0.0632	20
AX01222	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.114	0.113	0.110	0.085 to 0.115		114	70 to 130	1.33	20
AX01222	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.116	0.114	0.106	0.085 to 0.115		116	70 to 130	1.54	20
AX01222	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.107	0.105	0.104	0.085 to 0.115		107	70 to 130	1.52	20
AX01222	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.108	0.106	0.102	0.085 to 0.115		108	70 to 130	1.55	20
AX01222	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.102	0.101	0.0981	0.085 to 0.115		91.7	70 to 130	0.929	20
AX01222	Boron, Total	mg/L	0.000238	0.044	1.0	1.01	1.04	0.951	0.85 to 1.15		96.2	70 to 130	3.23	20
AX01222	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.107	0.106	0.103	0.085 to 0.115		107	70 to 130	0.667	20

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 Calera, AL 35040
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Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX01221

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX01260	Solids, Dissolved	mg/L	-6.0	25				1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7		0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55		0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1		0.546	20.7	18 to 22	109	80 to 120	39.7	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX01222

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	0.0101	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	3/28/2017	EPA 200.7		2	0.02	0.1	J 0.0445	mg/L
* Calcium, Total	HRG	3/28/2017	EPA 200.7		100	10.0	50	417	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7		2	0.01	0.05	J 0.0450	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C		1		250	4120	mg/L
* Chloride, Total	SES	1/20/2017	EPA 300.0		1	0.04	0.25	1.90	mg/L
* Fluoride, Total	SES	1/20/2017	EPA 300.0		1	0.01	0.3	J 0.223	mg/L
* Sulfate, Total	SES	1/23/2017	EPA 300.0		40	12.0	40	2650	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, 2017

Comments: Recovery for Calcium is out of spec.
 The spike amount is less than 30% of the sample amount.

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX01222

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX01219	Mercury, Total by CVAA	mg/L	0.000110	0.0005	0.004	0.00386	0.00384	0.00381	0.0034 to 0.0046		96.4	70 to 130	0.449	20
AX01222	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0913	0.0891	0.0971	0.085 to 0.115		91.3	70 to 130	2.46	20
AX01222	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.105	0.105	0.104	0.085 to 0.115		105	70 to 130	0.0632	20
AX01222	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.114	0.113	0.110	0.085 to 0.115		114	70 to 130	1.33	20
AX01222	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.116	0.114	0.106	0.085 to 0.115		116	70 to 130	1.54	20
AX01222	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.107	0.105	0.104	0.085 to 0.115		107	70 to 130	1.52	20
AX01222	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.108	0.106	0.102	0.085 to 0.115		108	70 to 130	1.55	20
AX01222	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0986	0.0983	0.103	0.085 to 0.115		98.6	70 to 130	0.279	20
AX01222	Lithium, Total	mg/L	-0.000161	0.022	0.20	0.291	0.300	0.185	0.17 to 0.23		123	70 to 130	2.88	20
AX01222	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0982	0.0978	0.102	0.085 to 0.115		98.2	70 to 130	0.344	20
AX01222	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.102	0.101	0.0981	0.085 to 0.115		91.7	70 to 130	0.929	20
AX01222	Boron, Total	mg/L	0.000238	0.044	1.0	1.01	1.04	0.951	0.85 to 1.15		96.2	70 to 130	3.23	20
AX01222	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.107	0.106	0.103	0.085 to 0.115		107	70 to 130	0.667	20
AX01222	Calcium, Total	mg/L	-0.00409	0.22	5.00	419	455	4.78	4.25 to 5.75		34.0	70 to 130	8.28	20
AX01222	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.104	0.102	0.0974	0.085 to 0.115		104	70 to 130	2.54	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of spec.
 The spike amount is less than 30% of the sample amount.

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



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 18-Jan-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX01222

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit	Limit			Duplicate	LFB	Limit	Rec	Limit	Prec	
AX01260	Solids, Dissolved	mg/L	-6.0	25			1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7	0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55	0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1	0.546	20.7	18 to 22	109	80 to 120	39.7	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of spec.
 The spike amount is less than 30% of the sample amount.

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX01258

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	J 0.00201	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	0.0119	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	3/30/2017	EPA 200.7		2	0.02	0.1	J 0.0963	mg/L
* Calcium, Total	HRG	5/20/2017	EPA 200.7		100	10	50	344	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	3/30/2017	EPA 200.7		2	0.01	0.05	0.295	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C		1		167	2750	mg/L
* Chloride, Total	SES	1/21/2017	EPA 300.0		1	0.04	0.25	2.23	mg/L
* Fluoride, Total	SES	1/21/2017	EPA 300.0		1	0.01	0.3	J 0.044	mg/L
* Sulfate, Total	SES	1/21/2017	EPA 300.0		20	6.0	20	1670	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX01258

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX01262	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.185	20
AX01262	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0984	0.102	0.103	0.085 to 0.115	98.4	70 to 130	3.21	20
AX01262	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0912	0.0927	0.0971	0.085 to 0.115	91.2	70 to 130	1.71	20
AX01262	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.102	0.103	0.104	0.085 to 0.115	102	70 to 130	0.802	20
AX01262	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.116	0.105	0.110	0.085 to 0.115	116	70 to 130	9.71	20
AX01262	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00393	0.00389	0.00385	0.0034 to 0.0046	98.2	70 to 130	0.926	20
AX01262	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.108	0.108	0.106	0.085 to 0.115	108	70 to 130	0.336	20
AX01262	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.0976	0.0982	0.0974	0.085 to 0.115	97.6	70 to 130	0.572	20
AX01261	Lithium, Total	mg/L	-0.0000716	0.022	0.20	0.441	0.435	0.214	0.17 to 0.23	158	70 to 130	1.29	20
AX01262	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.0935	0.0948	0.0981	0.085 to 0.115	93.5	70 to 130	1.48	20
AX01261	Boron, Total	mg/L	0.000211	0.044	1.00	1.21	1.21	0.986	0.85 to 1.15	103	70 to 130	0.717	20
AX01262	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0989	0.0988	0.102	0.085 to 0.115	98.9	70 to 130	0.0969	20
AX01258	Calcium, Total	mg/L	-0.005512	0.22				4.94	4.25 to 5.75		70 to 130		20
AX01262	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.624	20
AX01262	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.617	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX01258

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit	Limit			Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX01260	Solids, Dissolved	mg/L	-6.0	25			1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7	0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55	0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1	0.546	20.7	18 to 22	109	80 to 120	39.7	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

CC:

Alabama Power General Test Laboratory
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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX01259

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	3/30/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	3/30/2017	EPA 200.7		2	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	3/30/2017	EPA 200.7		2	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	1/21/2017	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	1/21/2017	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	1/21/2017	EPA 300.0		1	0.3	1	U Not Detected	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX01259

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX01262	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.185	20
AX01262	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0984	0.102	0.103	0.085 to 0.115	98.4	70 to 130	3.21	20
AX01262	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.108	0.108	0.106	0.085 to 0.115	108	70 to 130	0.336	20
AX01262	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.0976	0.0982	0.0974	0.085 to 0.115	97.6	70 to 130	0.572	20
AX01262	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0912	0.0927	0.0971	0.085 to 0.115	91.2	70 to 130	1.71	20
AX01262	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.102	0.103	0.104	0.085 to 0.115	102	70 to 130	0.802	20
AX01262	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.116	0.105	0.110	0.085 to 0.115	116	70 to 130	9.71	20
AX01262	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00393	0.00389	0.00385	0.0034 to 0.0046	98.2	70 to 130	0.926	20
AX01261	Boron, Total	mg/L	0.000211	0.044	1.00	1.21	1.21	0.986	0.85 to 1.15	103	70 to 130	0.717	20
AX01261	Calcium, Total	mg/L	-0.00837	0.22	5.00	352	352	5.01	4.25 to 5.75	-140	70 to 130	0.00	20
AX01262	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0989	0.0988	0.102	0.085 to 0.115	98.9	70 to 130	0.0969	20
AX01261	Lithium, Total	mg/L	-0.0000716	0.022	0.20	0.441	0.435	0.214	0.17 to 0.23	158	70 to 130	1.29	20
AX01262	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.0935	0.0948	0.0981	0.085 to 0.115	93.5	70 to 130	1.48	20
AX01262	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.624	20
AX01262	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.617	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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
 John Pugh

Customer Account: WMWGORLFFB
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX01259

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec Rec	Rec Limit	Prec	Prec Limit
AX01260	Solids, Dissolved	mg/L	-6.0	25			1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7	0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55	0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1	0.546	20.7	18 to 22	109	80 to 120	39.7	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report
 Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX01260

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	0.0203	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	3/30/2017	EPA 200.7		2	0.02	0.1	0.200	mg/L
* Calcium, Total	HRG	3/30/2017	EPA 200.7		10	1.0	5	168	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	0.0146	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	3/30/2017	EPA 200.7		2	0.01	0.05	0.300	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C		1		100	1300	mg/L
* Chloride, Total	SES	1/21/2017	EPA 300.0		1	0.04	0.25	1.61	mg/L
* Fluoride, Total	SES	1/21/2017	EPA 300.0		1	0.01	0.3	J 0.103	mg/L
* Sulfate, Total	SES	1/21/2017	EPA 300.0		20	6.0	20	700	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, 2017

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX01260

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX01262	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.185	20
AX01262	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0984	0.102	0.103	0.085 to 0.115	98.4	70 to 130	3.21	20
AX01262	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.108	0.108	0.106	0.085 to 0.115	108	70 to 130	0.336	20
AX01262	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.0976	0.0982	0.0974	0.085 to 0.115	97.6	70 to 130	0.572	20
AX01262	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.624	20
AX01262	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.617	20
AX01262	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.116	0.105	0.110	0.085 to 0.115	116	70 to 130	9.71	20
AX01262	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00393	0.00389	0.00385	0.0034 to 0.0046	98.2	70 to 130	0.926	20
AX01261	Lithium, Total	mg/L	-0.0000716	0.022	0.20	0.441	0.435	0.214	0.17 to 0.23	158	70 to 130	1.29	20
AX01262	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.0935	0.0948	0.0981	0.085 to 0.115	93.5	70 to 130	1.48	20
AX01261	Boron, Total	mg/L	0.000211	0.044	1.00	1.21	1.21	0.986	0.85 to 1.15	103	70 to 130	0.717	20
AX01261	Calcium, Total	mg/L	-0.00837	0.22	5.00	352	352	5.01	4.25 to 5.75	-140	70 to 130	0.00	20
AX01262	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0989	0.0988	0.102	0.085 to 0.115	98.9	70 to 130	0.0969	20
AX01262	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0912	0.0927	0.0971	0.085 to 0.115	91.2	70 to 130	1.71	20
AX01262	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.102	0.103	0.104	0.085 to 0.115	102	70 to 130	0.802	20

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 17-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX01260

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX01260	Solids, Dissolved	mg/L	-6.0	25				1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7		0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55		0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1		0.546	20.7	18 to 22	109	80 to 120	39.7	20

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX01261

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320	1				Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8	5		0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8	5		0.0010	0.005	0.0428	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8	5		0.0020	0.010	0.0112	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8	5		0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	3/30/2017	EPA 200.7	2		0.02	0.1	0.186	mg/L
* Calcium, Total	HRG	3/30/2017	EPA 200.7	10		1.0	5	359	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8	5		0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8	5		0.0020	0.010	0.0431	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8	5		0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	3/30/2017	EPA 200.7	2		0.01	0.05	0.125	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8	5		0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8	5		0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8	5		0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C	1			167	3360	mg/L
* Chloride, Total	SES	1/21/2017	EPA 300.0	1		0.04	0.25	3.60	mg/L
* Fluoride, Total	SES	1/21/2017	EPA 300.0	1		0.01	0.3	J 0.071	mg/L
* Sulfate, Total	SES	1/23/2017	EPA 300.0	40		12.0	40	1950	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, 2017

Comments: Recovery for Calcium is out of spec.
 The spike amount is less than 30% the sample amount.
 Recovery for Lithium is out of spec.
 Post digestion spike and serial dilution confirm matrix effect.

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX01261

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX01262	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.103	0.104	0.104	0.085 to 0.115	103	70 to 130	0.185	20
AX01262	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0984	0.102	0.103	0.085 to 0.115	98.4	70 to 130	3.21	20
AX01262	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.108	0.108	0.106	0.085 to 0.115	108	70 to 130	0.336	20
AX01262	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.0976	0.0982	0.0974	0.085 to 0.115	97.6	70 to 130	0.572	20
AX01262	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.116	0.105	0.110	0.085 to 0.115	116	70 to 130	9.71	20
AX01262	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00393	0.00389	0.00385	0.0034 to 0.0046	98.2	70 to 130	0.926	20
AX01262	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.624	20
AX01262	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.617	20
AX01262	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0912	0.0927	0.0971	0.085 to 0.115	91.2	70 to 130	1.71	20
AX01262	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.102	0.103	0.104	0.085 to 0.115	102	70 to 130	0.802	20
AX01261	Lithium, Total	mg/L	-0.0000716	0.022	0.20	0.441	0.435	0.214	0.17 to 0.23	158	70 to 130	1.29	20
AX01262	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.0935	0.0948	0.0981	0.085 to 0.115	93.5	70 to 130	1.48	20
AX01261	Boron, Total	mg/L	0.000211	0.044	1.00	1.21	1.21	0.986	0.85 to 1.15	103	70 to 130	0.717	20
AX01261	Calcium, Total	mg/L	-0.00837	0.22	5.00	352	352	5.01	4.25 to 5.75	-140	70 to 130	0.00	20
AX01262	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0989	0.0988	0.102	0.085 to 0.115	98.9	70 to 130	0.0969	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of spec.
 The spike amount is less than 30% the sample amount.
 Recovery for Lithium is out of spec.
 Post digestion spike and serial dilution confirm matrix effect.

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
 John Pugh

Customer Account: WMWGORLF
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX01261

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit	Limit			Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX01260	Solids, Dissolved	mg/L	-6.0	25			1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7	0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55	0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1	0.546	20.7	18 to 22	109	80 to 120	39.7	20

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recovery for Calcium is out of spec.
 The spike amount is less than 30% the sample amount.
 Recovery for Lithium is out of spec.
 Post digestion spike and serial dilution confirm matrix effect.

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
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX01262

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Radiological									
Total Radium, Test America	SGC	3/20/2017	EPA 9315/9320		1			Attached	
Metals, Cyanide, Total Phenols									
* Antimony, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Arsenic, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Beryllium, Total	JHK	2/13/2017	EPA 200.8		5	0.00060	0.0030	U Not Detected	mg/L
* Boron, Total	HRG	3/30/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	3/30/2017	EPA 200.7		2	0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	2/13/2017	EPA 200.8		5	0.0002	0.0010	U Not Detected	mg/L
* Cobalt, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Chromium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Mercury, Total by CVAA	MCW	1/27/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	3/30/2017	EPA 200.7		2	0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Lead, Total	JHK	2/13/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	2/13/2017	EPA 200.8		5	0.0020	0.010	U Not Detected	mg/L
* Thallium, Total	JHK	2/13/2017	EPA 200.8		5	0.00020	0.0010	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	1/20/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total	SES	1/21/2017	EPA 300.0		1	0.04	0.25	U Not Detected	mg/L
* Fluoride, Total	SES	1/21/2017	EPA 300.0		1	0.01	0.3	U Not Detected	mg/L
* Sulfate, Total	SES	1/21/2017	EPA 300.0		1	0.3	1	J 0.365	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, 2017

Comments: Precision for Sulfate is out of spec.
 Both the sample result and duplicate are below the reporting limit.
 Recovery for Fluoride is out of spec.

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
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX01262

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX01262	Lead, Total	mg/L	0.0000138	0.0022	0.10	0.103	0.104	0.104	0.085 to 0.115		103	70 to 130	0.185	20
AX01262	Cadmium, Total	mg/L	0.0000171	0.00044	0.10	0.0984	0.102	0.103	0.085 to 0.115		98.4	70 to 130	3.21	20
AX01262	Cobalt, Total	mg/L	0.00000313	0.0044	0.10	0.108	0.108	0.106	0.085 to 0.115		108	70 to 130	0.336	20
AX01262	Molybdenum, Total	mg/L	0.0000179	0.0044	0.10	0.0976	0.0982	0.0974	0.085 to 0.115		97.6	70 to 130	0.572	20
AX01261	Lithium, Total	mg/L	-0.0000716	0.022	0.20	0.441	0.435	0.214	0.17 to 0.23		158	70 to 130	1.29	20
AX01262	Barium, Total	mg/L	0.00000487	0.0044	0.10	0.0935	0.0948	0.0981	0.085 to 0.115		93.5	70 to 130	1.48	20
AX01262	Antimony, Total	mg/L	0.0000741	0.00132	0.10	0.0912	0.0927	0.0971	0.085 to 0.115		91.2	70 to 130	1.71	20
AX01262	Arsenic, Total	mg/L	0.0000191	0.0022	0.10	0.102	0.103	0.104	0.085 to 0.115		102	70 to 130	0.802	20
AX01261	Boron, Total	mg/L	0.000211	0.044	1.00	1.21	1.21	0.986	0.85 to 1.15		103	70 to 130	0.717	20
AX01261	Calcium, Total	mg/L	-0.00837	0.22	5.00	352	352	5.01	4.25 to 5.75		-140	70 to 130	0.00	20
AX01262	Selenium, Total	mg/L	0.0000402	0.0044	0.10	0.0989	0.0988	0.102	0.085 to 0.115		98.9	70 to 130	0.0969	20
AX01262	Beryllium, Total	mg/L	0.0000241	0.00132	0.10	0.116	0.105	0.110	0.085 to 0.115		116	70 to 130	9.71	20
AX01262	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00393	0.00389	0.00385	0.0034 to 0.0046		98.2	70 to 130	0.926	20
AX01262	Chromium, Total	mg/L	0.0000150	0.0044	0.10	0.104	0.103	0.103	0.085 to 0.115		104	70 to 130	0.624	20
AX01262	Thallium, Total	mg/L	0.0000117	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115		104	70 to 130	0.617	20

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Precision for Sulfate is out of spec.
 Both the sample result and duplicate are below the reporting limit.
 Recovery for Fluoride is out of spec.

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
 John Pugh

Customer Account: WMWGORLFEB
 Sample Date: 18-Jan-17
 Customer ID:
 Delivery Date: 19-Jan-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX01262

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
			Limit	Limit			Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX01260	Solids, Dissolved	mg/L	-6.0	25			1330	50.0	40 to 60			0.912	5
AX01262	Chloride, Total	mg/L	0.00	0.25	10.00	10.7	0.00	10.6	9 to 11	107	80 to 120	0.00	20
AX01262	Fluoride, Total	mg/L	0.00	0.3	2.00	2.55	0.00	1.96	1.8 to 2.2	128	80 to 120	0.00	20
AX01262	Sulfate, Total	mg/L	0.027	1.0	20.00	22.1	0.546	20.7	18 to 22	109	80 to 120	39.7	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

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 Both the sample result and duplicate are below the reporting limit.
 Recovery for Fluoride is out of spec.

CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 01/19/2017 08:00

Requested Complete Date	Routine
Site Representative	Che George
Collector	Jason Rouss

Results To	Dustin Brooks, John Pugh, Greg Dyer
Requested By	Greg Dyer
Location	Gorgas Landfill

Analysis Requested	Bottle 1: Radium 226 & 228 (1) 1L bottle, Bottle 2: Metals and Hg (1) 500 mL bottle, Bottle 3: TDS and Anions (1) 500 mL bottle
Comments	

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-11	01/17/2017	12:35	3	Groundwater		AX01258
FB-1	01/17/2017	12:50	3	Field Blank		AX01259
MW-10	01/17/2017	15:00	3	Groundwater		AX01260
MW-12	01/18/2017	10:30	3	Groundwater		AX01261
EB-1	01/18/2017	11:00	3	Equipment Blank		AX01262

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: 2017.01.19 09:11:16 -0600</small>	01/19/2017 09:11

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> Cooler Temp 0.4 degrees C Thermometer ID 5408-27568-2-2 pH Strip ID 5521-28267-20-11
Turbidity ID	4677-23342-4-1	
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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: 400-133551-2

TestAmerica Sample Delivery Group: Gorgas Landfill (6)

Client Project/Site: CCR Plant Gorgas

For:

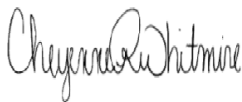
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

3/18/2017 4:28:06 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-133551-2
SDG: Gorgas Landfill (6)

Job ID: 400-133551-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-133551-2

RAD

Method(s) PrecSep_0: Radium-228 Prep Batch 160-293137: The following samples were run at a reduced aliquot due to limited sample volume available: AX01218 MW-1 (400-133551-7), AX01220 MW-2 (400-133551-8), AX01221 MW-3 (400-133551-9), AX01222 MW-4 (400-133551-10), AX01222 MW-4 (400-133551-10[DUJ]), AX01219 MW-1 DUP (400-133551-11), AX01258 MW-11 (400-133551-12), AX01259 FB-1 (400-133551-13), AX01260 MW-10 (400-133551-14), AX01261 MW-12 (400-133551-15) and AX01262 EB-1 (400-133551-16).

Method(s) PrecSep-21: Radium-228 Prep Batch 160-293086: The following samples were run at a reduced aliquot due to limited sample volume available: AX01218 MW-1 (400-133551-7), AX01220 MW-2 (400-133551-8), AX01221 MW-3 (400-133551-9), AX01222 MW-4 (400-133551-10), AX01222 MW-4 (400-133551-10[DUJ]), AX01219 MW-1 DUP (400-133551-11), AX01258 MW-11 (400-133551-12), AX01259 FB-1 (400-133551-13), AX01260 MW-10 (400-133551-14), AX01261 MW-12 (400-133551-15) and AX01262 EB-1 (400-133551-16).

Method Summary

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

TestAmerica Job ID: 400-133551-2
SDG: Gorgas Landfill (6)

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: 400-133551-2
SDG: Gorgas Landfill (6)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-133551-7	AX01218 MW-1	Water	01/17/17 11:44	02/06/17 14:00
400-133551-8	AX01220 MW-2	Water	01/17/17 12:43	02/06/17 14:00
400-133551-9	AX01221 MW-3	Water	01/18/17 10:42	02/06/17 14:00
400-133551-10	AX01222 MW-4	Water	01/18/17 11:38	02/06/17 14:00
400-133551-11	AX01219 MW-1 DUP	Water	01/17/17 11:44	02/06/17 14:00
400-133551-12	AX01258 MW-11	Water	01/17/17 12:35	02/06/17 14:00
400-133551-13	AX01259 FB-1	Water	01/17/17 12:50	02/06/17 14:00
400-133551-14	AX01260 MW-10	Water	01/17/17 15:00	02/06/17 14:00
400-133551-15	AX01261 MW-12	Water	01/18/17 10:30	02/06/17 14:00
400-133551-16	AX01262 EB-1	Water	01/18/17 11:00	02/06/17 14:00

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01218 MW-1

Lab Sample ID: 400-133551-7

Date Collected: 01/17/17 11:44

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.147	U	0.138	0.139	1.00	0.215	pCi/L	02/17/17 10:58	03/13/17 04:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					02/17/17 10:58	03/13/17 04:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.161	U	0.392	0.392	1.00	0.670	pCi/L	02/17/17 18:26	03/07/17 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					02/17/17 18:26	03/07/17 14:19	1
Y Carrier	86.4		40 - 110					02/17/17 18:26	03/07/17 14:19	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	0.308	U	0.416	0.416	5.00	0.670	pCi/L		03/14/17 12:39	1

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01220 MW-2

Lab Sample ID: 400-133551-8

Date Collected: 01/17/17 12:43

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0513	U	0.115	0.115	1.00	0.209	pCi/L	02/17/17 10:58	03/13/17 04:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.8		40 - 110					02/17/17 10:58	03/13/17 04:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0672	U	0.366	0.366	1.00	0.662	pCi/L	02/17/17 18:26	03/07/17 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.8		40 - 110					02/17/17 18:26	03/07/17 14:20	1
Y Carrier	88.6		40 - 110					02/17/17 18:26	03/07/17 14:20	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	-0.0159	U	0.383	0.383	5.00	0.662	pCi/L		03/14/17 12:39	1

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01221 MW-3

Lab Sample ID: 400-133551-9

Date Collected: 01/18/17 10:42

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0627	U	0.103	0.103	1.00	0.179	pCi/L	02/17/17 10:58	03/13/17 04:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					02/17/17 10:58	03/13/17 04:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.543		0.341	0.345	1.00	0.522	pCi/L	02/17/17 18:26	03/07/17 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					02/17/17 18:26	03/07/17 14:20	1
Y Carrier	86.7		40 - 110					02/17/17 18:26	03/07/17 14:20	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	0.606		0.357	0.360	5.00	0.522	pCi/L		03/14/17 12:39	1

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01222 MW-4

Lab Sample ID: 400-133551-10

Date Collected: 01/18/17 11:38

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00995	U	0.0737	0.0737	1.00	0.159	pCi/L	02/17/17 10:58	03/13/17 04:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					02/17/17 10:58	03/13/17 04:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0366	U	0.274	0.274	1.00	0.484	pCi/L	02/17/17 18:26	03/07/17 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					02/17/17 18:26	03/07/17 14:20	1
Y Carrier	91.2		40 - 110					02/17/17 18:26	03/07/17 14:20	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	0.0267	U	0.284	0.284	5.00	0.484	pCi/L		03/14/17 12:39	1

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01219 MW-1 DUP

Lab Sample ID: 400-133551-11

Date Collected: 01/17/17 11:44

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0489	U	0.0809	0.0810	1.00	0.142	pCi/L	02/17/17 10:58	03/13/17 04:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					02/17/17 10:58	03/13/17 04:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.308	U	0.276	0.278	1.00	0.443	pCi/L	02/17/17 18:26	03/07/17 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					02/17/17 18:26	03/07/17 14:20	1
Y Carrier	90.5		40 - 110					02/17/17 18:26	03/07/17 14:20	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	0.357	U	0.288	0.289	5.00	0.443	pCi/L		03/14/17 12:39	1

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01258 MW-11

Lab Sample ID: 400-133551-12

Date Collected: 01/17/17 12:35

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142	U	0.134	0.135	1.00	0.209	pCi/L	02/17/17 10:58	03/13/17 04:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.8		40 - 110					02/17/17 10:58	03/13/17 04:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.329	U	0.316	0.317	1.00	0.619	pCi/L	02/17/17 18:26	03/07/17 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.8		40 - 110					02/17/17 18:26	03/07/17 14:20	1
Y Carrier	87.9		40 - 110					02/17/17 18:26	03/07/17 14:20	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	-0.187	U	0.343	0.344	5.00	0.619	pCi/L		03/14/17 12:39	1

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01259 FB-1

Lab Sample ID: 400-133551-13

Date Collected: 01/17/17 12:50

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0835	U	0.104	0.104	1.00	0.172	pCi/L	02/17/17 10:58	03/13/17 04:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					02/17/17 10:58	03/13/17 04:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00828	U	0.290	0.290	1.00	0.520	pCi/L	02/17/17 18:26	03/07/17 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					02/17/17 18:26	03/07/17 14:20	1
Y Carrier	86.4		40 - 110					02/17/17 18:26	03/07/17 14:20	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	0.0753	U	0.308	0.308	5.00	0.520	pCi/L		03/14/17 12:39	1

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01260 MW-10

Lab Sample ID: 400-133551-14

Date Collected: 01/17/17 15:00

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0780	U	0.100	0.101	1.00	0.167	pCi/L	02/17/17 10:58	03/13/17 04:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					02/17/17 10:58	03/13/17 04:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.158	U	0.310	0.311	1.00	0.530	pCi/L	02/17/17 18:26	03/07/17 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					02/17/17 18:26	03/07/17 14:20	1
Y Carrier	87.9		40 - 110					02/17/17 18:26	03/07/17 14:20	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	0.236	U	0.326	0.326	5.00	0.530	pCi/L		03/14/17 12:39	1

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01261 MW-12

Lab Sample ID: 400-133551-15

Date Collected: 01/18/17 10:30

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.148	U	0.109	0.110	1.00	0.153	pCi/L	02/17/17 10:58	03/13/17 04:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					02/17/17 10:58	03/13/17 04:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0682	U	0.240	0.240	1.00	0.421	pCi/L	02/17/17 18:26	03/07/17 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					02/17/17 18:26	03/07/17 14:20	1
Y Carrier	90.5		40 - 110					02/17/17 18:26	03/07/17 14:20	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	0.216	U	0.264	0.264	5.00	0.421	pCi/L		03/14/17 12:39	1

Client Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01262 EB-1

Lab Sample ID: 400-133551-16

Date Collected: 01/18/17 11:00

Matrix: Water

Date Received: 02/06/17 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0280	U	0.105	0.105	1.00	0.195	pCi/L	02/17/17 10:58	03/13/17 04:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					02/17/17 10:58	03/13/17 04:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.137	U	0.242	0.242	1.00	0.460	pCi/L	02/17/17 18:26	03/07/17 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					02/17/17 18:26	03/07/17 14:20	1
Y Carrier	90.1		40 - 110					02/17/17 18:26	03/07/17 14:20	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	-0.109	U	0.263	0.264	5.00	0.460	pCi/L		03/14/17 12:39	1

Definitions/Glossary

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

TestAmerica Job ID: 400-133551-2
SDG: Gorgas Landfill (6)

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01218 MW-1

Lab Sample ID: 400-133551-7

Date Collected: 01/17/17 11:44

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297322	03/13/17 04:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:19	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

Client Sample ID: AX01220 MW-2

Lab Sample ID: 400-133551-8

Date Collected: 01/17/17 12:43

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297322	03/13/17 04:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:20	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

Client Sample ID: AX01221 MW-3

Lab Sample ID: 400-133551-9

Date Collected: 01/18/17 10:42

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297320	03/13/17 04:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:20	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

Client Sample ID: AX01222 MW-4

Lab Sample ID: 400-133551-10

Date Collected: 01/18/17 11:38

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297320	03/13/17 04:40	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:20	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Client Sample ID: AX01219 MW-1 DUP

Lab Sample ID: 400-133551-11

Date Collected: 01/17/17 11:44

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297320	03/13/17 04:40	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:20	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

Client Sample ID: AX01258 MW-11

Lab Sample ID: 400-133551-12

Date Collected: 01/17/17 12:35

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297320	03/13/17 04:40	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:20	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

Client Sample ID: AX01259 FB-1

Lab Sample ID: 400-133551-13

Date Collected: 01/17/17 12:50

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297320	03/13/17 04:40	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:20	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

Client Sample ID: AX01260 MW-10

Lab Sample ID: 400-133551-14

Date Collected: 01/17/17 15:00

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297320	03/13/17 04:40	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:20	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-133551-2
SDG: Gorgas Landfill (6)

Client Sample ID: AX01261 MW-12

Lab Sample ID: 400-133551-15

Date Collected: 01/18/17 10:30

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297320	03/13/17 04:40	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:20	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

Client Sample ID: AX01262 EB-1

Lab Sample ID: 400-133551-16

Date Collected: 01/18/17 11:00

Matrix: Water

Date Received: 02/06/17 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293086	02/17/17 10:58	PJM	TAL SL
Total/NA	Analysis	9315		1	297320	03/13/17 04:40	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293137	02/17/17 18:26	PJM	TAL SL
Total/NA	Analysis	9320		1	296334	03/07/17 14:20	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	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: 400-133551-2
SDG: Gorgas Landfill (6)

Rad

Prep Batch: 293086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133551-7	AX01218 MW-1	Total/NA	Water	PrecSep-21	
400-133551-8	AX01220 MW-2	Total/NA	Water	PrecSep-21	
400-133551-9	AX01221 MW-3	Total/NA	Water	PrecSep-21	
400-133551-10	AX01222 MW-4	Total/NA	Water	PrecSep-21	
400-133551-11	AX01219 MW-1 DUP	Total/NA	Water	PrecSep-21	
400-133551-12	AX01258 MW-11	Total/NA	Water	PrecSep-21	
400-133551-13	AX01259 FB-1	Total/NA	Water	PrecSep-21	
400-133551-14	AX01260 MW-10	Total/NA	Water	PrecSep-21	
400-133551-15	AX01261 MW-12	Total/NA	Water	PrecSep-21	
400-133551-16	AX01262 EB-1	Total/NA	Water	PrecSep-21	
MB 160-293086/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-293086/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-133551-10 DU	AX01222 MW-4	Total/NA	Water	PrecSep-21	
400-133551-A-3-B DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 293137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133551-7	AX01218 MW-1	Total/NA	Water	PrecSep_0	
400-133551-8	AX01220 MW-2	Total/NA	Water	PrecSep_0	
400-133551-9	AX01221 MW-3	Total/NA	Water	PrecSep_0	
400-133551-10	AX01222 MW-4	Total/NA	Water	PrecSep_0	
400-133551-11	AX01219 MW-1 DUP	Total/NA	Water	PrecSep_0	
400-133551-12	AX01258 MW-11	Total/NA	Water	PrecSep_0	
400-133551-13	AX01259 FB-1	Total/NA	Water	PrecSep_0	
400-133551-14	AX01260 MW-10	Total/NA	Water	PrecSep_0	
400-133551-15	AX01261 MW-12	Total/NA	Water	PrecSep_0	
400-133551-16	AX01262 EB-1	Total/NA	Water	PrecSep_0	
MB 160-293137/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-293137/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-133551-10 DU	AX01222 MW-4	Total/NA	Water	PrecSep_0	
400-133551-A-3-D DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-293086/1-A
Matrix: Water
Analysis Batch: 297322

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 293086

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01132	U	0.0750	0.0750	1.00	0.167	pCi/L	02/17/17 10:58	03/13/17 04:29	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					02/17/17 10:58	03/13/17 04:29	1

Lab Sample ID: LCS 160-293086/2-A
Matrix: Water
Analysis Batch: 297322

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 293086

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.2	14.31		1.53	1.00	0.170	pCi/L	94	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	99.7		40 - 110						

Lab Sample ID: 400-133551-10 DU
Matrix: Water
Analysis Batch: 297320

Client Sample ID: AX01222 MW-4
Prep Type: Total/NA
Prep Batch: 293086

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	-0.00995	U	0.01861	U	0.0920	1.00	0.182	pCi/L	0.17	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	96.2		40 - 110							

Lab Sample ID: 400-133551-A-3-B DU
Matrix: Water
Analysis Batch: 297322

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 293086

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0755	U	0.04167	U	0.0907	1.00	0.166	pCi/L	0.17	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	88.8		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-293137/1-A
Matrix: Water
Analysis Batch: 296334

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 293137

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.02779	U	0.265	0.265	1.00	0.469	pCi/L	02/17/17 18:26	03/07/17 14:19	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110	02/17/17 18:26	03/07/17 14:19	1
Y Carrier	90.8		40 - 110	02/17/17 18:26	03/07/17 14:19	1

Lab Sample ID: LCS 160-293137/2-A
Matrix: Water
Analysis Batch: 296334

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 293137

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	18.3	18.04		1.93	1.00	0.443	pCi/L	98	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	99.7		40 - 110
Y Carrier	91.6		40 - 110

Lab Sample ID: 400-133551-10 DU
Matrix: Water
Analysis Batch: 296334

Client Sample ID: AX01222 MW-4
Prep Type: Total/NA
Prep Batch: 293137

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.0366	U	0.2263	U	0.302	1.00	0.502	pCi/L	0.33	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	96.2		40 - 110
Y Carrier	90.1		40 - 110

Lab Sample ID: 400-133551-A-3-D DU
Matrix: Water
Analysis Batch: 296334

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 293137

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.417	U	0.2939	U	0.312	1.00	0.507	pCi/L	0.20	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	88.8		40 - 110
Y Carrier	89.0		40 - 110

QC Sample Results

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

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

Lab Sample ID: 400-133551-10 DU
 Matrix: Water
 Analysis Batch: 297652

Client Sample ID: AX01222 MW-4
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.0267	U	0.2449	U	0.316	5.00	0.502	pCi/L	0.36	

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- 12
- 13

TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sample: Anthony Goggins/ Jason Rous		Lab PM: Whitnire, Cheyenne R	
Client Contact: Sarah Copeland		Phone:		E-Mail: cheyenne.whitnire@testamericainc.com	
Company: Alabama Power General Test Laboratory		Due Date Requested:		Carrier Tracking No.:	
Address: 744 County Rd 87 GSC #8		TAT Requested (days):		Job #: 100-13351	
City: Calera		PO #:		Preservation Codes:	
State, Zip: AL, 35040		MO #:		M - Hexane N - None O - Ash/C2 P - Na2CO3 Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - Ph 4-5 Z - other (specify)	
Phone: 205-664-6121 (Tel)		Project #:		Other:	
Email: sgcopela@southemco.com		SSON #:		Special Instructions/Note:	
Project Name: CCR		Site: Goggas Landfill (S)		MW-1 Dup (Sample Duplicate)	
Site: Goggas Landfill (S)		Sample Date		Sample Type (C=Comp, G=Grab)	
Sample Identification		Sample Time		Matrix (W=Water, S=Solid, O=Organic, B=Trace, A=Air)	
AX01219	1/17/17	1144	G	Water	X
AX01258	1/17/17	1235	G	Water	X
AX01259	1/17/17	1250	G	Water	X
AX01260	1/17/17	1500	G	Water	X
AX01261	1/18/17	1030	G	Water	X
AX01262	1/18/17	1100	G	Water	X
AX01218	1/17/17	1144	G	Water	X
AX01220	1/17/17	1243	G	Water	X
AX01221	1/18/17	1042	G	Water	X
AX01222	1/18/17	1138	G	Water	X
Possible Hazard Identification <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 Relinquished by: _____ Date/Time: 2/17/2017, 1050 Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____					
Custody Seal No.: _____ A Yes A No					



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-133551-2
SDG Number: Gorgas Landfill (6)

Login Number: 133551

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	N/A	Thermal preservation not required.
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 <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	



Certification Summary

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

TestAmerica Job ID: 400-133551-2
 SDG: Gorgas Landfill (6)

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17 *

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 400-133551-2
SDG: Gorgas Landfill (6)

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-18
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

* Certification renewal pending - 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

 Alabama Power



Sample Group : WMWGORLF_1081

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1081

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
3. All anions were outsourced to Test America, Pensacola. Below is the Job Narrative provided by Test America.

**Job Narrative
400-135678-2
General Chemistry**

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 348061 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 348438 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: AX06704 MW-2 (400-135678-8), AX06705 MW-3 (400-135678-9), AX06706 MW-4 (400-135678-10), AX06717 MW-12 (400-135678-11) and AX06721 MW-4 DUP (400-135678-14). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The method blank associated with analytical batch 348054 contained Sulfate less than one-half the reporting limit (RL). The sample results have been qualified and reported.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 349656 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.



Metals ICP

Gorgas Landfill

WMWGORLF_1081

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AX06717	20170414F, 20170419B &20170517B	WMWGORLF_1081
AX06718	20170414F, 20170419B &20170517B	WMWGORLF_1081
AX06719	20170414F, 20170419B &20170517B	WMWGORLF_1081
AX06720	20170414F, 20170419B &20170517B	WMWGORLF_1081
AX06721	20170414F, 20170419B &20170517B	WMWGORLF_1081
AX06722	20170414F, 20170419B &20170517B	WMWGORLF_1081
AX06723	20170414F, 20170419B &20170517B	WMWGORLF_1081
AX06724	20170414F, 20170419B &20170517B	WMWGORLF_1081
AX06725	20170414F, 20170419B &20170517B	WMWGORLF_1081
AX06726	20170414F, 20170419B &20170517B	WMWGORLF_1081

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

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes except for Lithium analysis on 20170414F. Original run (20170414F) and Calcium dilution run (20170419B) had an additional CCV between each sample to monitor potential Li matrix issues. Lithium analysis on 20170517B did not utilize the additional CCV between each sample due to incorporation of Cesium ionization buffer. All corresponding CCVs passed for 20170517B.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes. Original run, Calcium dilution run and Lithium recheck run had an additional blank rinse between each sample to monitor potential Li matrix issues.
- 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, with the exception of Lithium. The initial run had a greater than 10% high standard error. Lithium was re-run and reported on 20170517B with acceptable results.
- 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:

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AX06724

The concentration of the matrix spike added was less than 30 percent of the concentration of the sample 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 2x dilution to compensate for matrix effects. The following samples were run at a 10x dilution due to final result exceeding the high standard of the calibration curve.

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AX06717	Calcium	10x
AX06718	Calcium	10x
AX06719	Calcium	10x
AX06720	Calcium	10x
AX06721	Calcium	10x
AX06722	Calcium	10x

Alabama Power General Test Laboratory
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FAX (205) 257-1654

Case Narrative



AX06723	Calcium	10x
AX06724	Calcium	10x
AX06724MS	Calcium	10x
AX06724MSD	Calcium	10x

8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1081

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AX06717	590520	WMWGORLF_1081
AX06718	590520	WMWGORLF_1081
AX06719	590520	WMWGORLF_1081
AX06721	590520	WMWGORLF_1081
AX06725	590520	WMWGORLF_1081
AX06726	590520	WMWGORLF_1081
AX06724	590427	WMWGORLF_1081
AX06723	590427	WMWGORLF_1081
AX06722	590427	WMWGORLF_1081
AX06720	590427	WMWGORLF_1081

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_1081

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AX06720	590391	WMWGORLF_1081
AX06722	590391	WMWGORLF_1081
AX06723	590391	WMWGORLF_1081
AX06724	590391	WMWGORLF_1081
AX06717	590394	WMWGORLF_1081
AX06718	590394	WMWGORLF_1081
AX06719	590394	WMWGORLF_1081
AX06721	590394	WMWGORLF_1081
AX06725	590394	WMWGORLF_1081
AX06726	590394	WMWGORLF_1081

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_1081

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. All samples were received intact and properly preserved.
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>
AX06717	590106	WMWGORLF_1081
AX06718	590106	WMWGORLF_1081
AX06719	590106	WMWGORLF_1081
AX06720	590293	WMWGORLF_1081
AX06721	590106	WMWGORLF_1081
AX06722	590293	WMWGORLF_1081
AX06723	590293	WMWGORLF_1081
AX06724	590293	WMWGORLF_1081
AX06725	590293	WMWGORLF_1081
AX06726	590293	WMWGORLF_1081

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 0.5 mg 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 2.5 mg and 200 mg residue with the exception of AX06725 and AX06726 which were <2.5mg.

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-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX06717

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	0.0418	mg/L
* Barium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	0.0108	mg/L
* Beryllium, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7	2		0.02	0.1	0.183	mg/L
* Calcium, Total	HRG	4/19/2017	EPA 200.7	10		1.0	5	352	mg/L
* Cadmium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	0.0414	mg/L
* Chromium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7	2		0.01	0.05	0.0930	mg/L
* Molybdenum, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	SES	3/27/2017	SM 2540C	1			125	3320	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E	1		0.60	2.00	3.6	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C	1		0.032	0.10	J 0.090	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E	70		98.0	350	2400	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, 2017

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: 21-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX06717

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23	116	70 to 130	2.33	20
AX06726	Beryllium, Total	mg/L	0.0000292	0.00132	0.10	0.0950	0.0941	0.103	0.085 to 0.115	95.0	70 to 130	0.911	20
AX06726	Cobalt, Total	mg/L	0.00000189	0.0044	0.10	0.0950	0.0933	0.111	0.085 to 0.115	95.0	70 to 130	1.80	20
AX06726	Arsenic, Total	mg/L	0.0000143	0.0022	0.10	0.0942	0.0940	0.102	0.085 to 0.115	94.2	70 to 130	0.173	20
AX06726	Chromium, Total	mg/L	0.0000163	0.0044	0.10	0.101	0.0993	0.104	0.085 to 0.115	101	70 to 130	1.57	20
AX06726	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00391	0.00383	0.00390	0.0034 to 0.0046	97.8	70 to 130	2.08	20
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15	103	70 to 130	1.52	20
AX06726	Lead, Total	mg/L	0.0000243	0.0022	0.10	0.0812	0.0816	0.102	0.085 to 0.115	81.2	70 to 130	0.471	20
AX06726	Thallium, Total	mg/L	0.0000223	0.00044	0.10	0.0979	0.0969	0.0995	0.085 to 0.115	97.9	70 to 130	1.08	20
AX06726	Antimony, Total	mg/L	0.0000488	0.00132	0.10	0.0957	0.0946	0.0947	0.085 to 0.115	95.7	70 to 130	1.17	20
AX06726	Barium, Total	mg/L	0.0000138	0.0044	0.10	0.0903	0.0899	0.0959	0.085 to 0.115	90.3	70 to 130	0.397	20
AX06726	Selenium, Total	mg/L	0.0000405	0.0044	0.10	0.0918	0.0912	0.0991	0.085 to 0.115	91.8	70 to 130	0.738	20
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75	40.3	70 to 130	0.129	20
AX06726	Cadmium, Total	mg/L	0.00000390	0.00044	0.10	0.0938	0.0925	0.102	0.085 to 0.115	93.8	70 to 130	1.33	20
AX06726	Molybdenum, Total	mg/L	0.00000829	0.0044	0.10	0.0950	0.0934	0.0963	0.085 to 0.115	95.0	70 to 130	1.73	20

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Test America Pensacola NELAP ID: E81010

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: 21-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX06717

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06721	Solids, Dissolved	mg/L	5.00	25			3850	58.0	40 to 60	1.12	5

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: 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: 21-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX06718

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	J 0.00183	mg/L
* Barium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	0.0120	mg/L
* Beryllium, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7	2		0.02	0.1	J 0.0947	mg/L
* Calcium, Total	HRG	4/19/2017	EPA 200.7	10		1.0	5	396	mg/L
* Cadmium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7	2		0.01	0.05	0.234	mg/L
* Molybdenum, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	SES	3/27/2017	SM 2540C	1			125	2750	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E	1		0.60	2.00	2.5	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C	1		0.032	0.10	J 0.080	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E	55		77.0	280	1900	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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: 21-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX06718

Sample	Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23	116	70 to 130	2.33	20	
AX06726	Beryllium, Total	mg/L	0.0000292	0.00132	0.10	0.0950	0.0941	0.103	0.085 to 0.115	95.0	70 to 130	0.911	20	
AX06726	Cobalt, Total	mg/L	0.00000189	0.0044	0.10	0.0950	0.0933	0.111	0.085 to 0.115	95.0	70 to 130	1.80	20	
AX06726	Arsenic, Total	mg/L	0.0000143	0.0022	0.10	0.0942	0.0940	0.102	0.085 to 0.115	94.2	70 to 130	0.173	20	
AX06726	Chromium, Total	mg/L	0.0000163	0.0044	0.10	0.101	0.0993	0.104	0.085 to 0.115	101	70 to 130	1.57	20	
AX06726	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00391	0.00383	0.00390	0.0034 to 0.0046	97.8	70 to 130	2.08	20	
AX06726	Antimony, Total	mg/L	0.0000488	0.00132	0.10	0.0957	0.0946	0.0947	0.085 to 0.115	95.7	70 to 130	1.17	20	
AX06726	Barium, Total	mg/L	0.0000138	0.0044	0.10	0.0903	0.0899	0.0959	0.085 to 0.115	90.3	70 to 130	0.397	20	
AX06726	Selenium, Total	mg/L	0.0000405	0.0044	0.10	0.0918	0.0912	0.0991	0.085 to 0.115	91.8	70 to 130	0.738	20	
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75	40.3	70 to 130	0.129	20	
AX06726	Cadmium, Total	mg/L	0.00000390	0.00044	0.10	0.0938	0.0925	0.102	0.085 to 0.115	93.8	70 to 130	1.33	20	
AX06726	Molybdenum, Total	mg/L	0.00000829	0.0044	0.10	0.0950	0.0934	0.0963	0.085 to 0.115	95.0	70 to 130	1.73	20	
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15	103	70 to 130	1.52	20	
AX06726	Lead, Total	mg/L	0.0000243	0.0022	0.10	0.0812	0.0816	0.102	0.085 to 0.115	81.2	70 to 130	0.471	20	
AX06726	Thallium, Total	mg/L	0.0000223	0.00044	0.10	0.0979	0.0969	0.0995	0.085 to 0.115	97.9	70 to 130	1.08	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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: 21-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX06718

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06721	Solids, Dissolved	mg/L	5.00	25			3850	58.0	40 to 60	1.12	5

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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 21-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX06719

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	0.0203	mg/L
* Beryllium, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	J 0.000883	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7	2		0.02	0.1	0.178	mg/L
* Calcium, Total	HRG	4/19/2017	EPA 200.7	10		1.0	5	152	mg/L
* Cadmium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	0.0130	mg/L
* Chromium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7	2		0.01	0.05	0.218	mg/L
* Molybdenum, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	SES	3/27/2017	SM 2540C	1			50	1170	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.6	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C	1		0.032	0.10	0.15	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E	50		70.0	250	660	mg/L

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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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: WMWGORLF
 Sample Date: 21-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX06719

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23	116	70 to 130	2.33	20
AX06726	Cobalt, Total	mg/L	0.00000189	0.0044	0.10	0.0950	0.0933	0.111	0.085 to 0.115	95.0	70 to 130	1.80	20
AX06726	Beryllium, Total	mg/L	0.0000292	0.00132	0.10	0.0950	0.0941	0.103	0.085 to 0.115	95.0	70 to 130	0.911	20
AX06726	Arsenic, Total	mg/L	0.0000143	0.0022	0.10	0.0942	0.0940	0.102	0.085 to 0.115	94.2	70 to 130	0.173	20
AX06726	Chromium, Total	mg/L	0.0000163	0.0044	0.10	0.101	0.0993	0.104	0.085 to 0.115	101	70 to 130	1.57	20
AX06726	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00391	0.00383	0.00390	0.0034 to 0.0046	97.8	70 to 130	2.08	20
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15	103	70 to 130	1.52	20
AX06726	Lead, Total	mg/L	0.0000243	0.0022	0.10	0.0812	0.0816	0.102	0.085 to 0.115	81.2	70 to 130	0.471	20
AX06726	Thallium, Total	mg/L	0.0000223	0.00044	0.10	0.0979	0.0969	0.0995	0.085 to 0.115	97.9	70 to 130	1.08	20
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75	40.3	70 to 130	0.129	20
AX06726	Cadmium, Total	mg/L	0.00000390	0.00044	0.10	0.0938	0.0925	0.102	0.085 to 0.115	93.8	70 to 130	1.33	20
AX06726	Molybdenum, Total	mg/L	0.00000829	0.0044	0.10	0.0950	0.0934	0.0963	0.085 to 0.115	95.0	70 to 130	1.73	20
AX06726	Antimony, Total	mg/L	0.0000488	0.00132	0.10	0.0957	0.0946	0.0947	0.085 to 0.115	95.7	70 to 130	1.17	20
AX06726	Barium, Total	mg/L	0.0000138	0.0044	0.10	0.0903	0.0899	0.0959	0.085 to 0.115	90.3	70 to 130	0.397	20
AX06726	Selenium, Total	mg/L	0.0000405	0.0044	0.10	0.0918	0.0912	0.0991	0.085 to 0.115	91.8	70 to 130	0.738	20

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Issued By: State of Florida, Department of Health

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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: 21-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX06719

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06721	Solids, Dissolved	mg/L	5.00	25			3850	58.0	40 to 60	1.12	5

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 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-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX06720

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	4/3/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	0.0103	mg/L
* Beryllium, Total	JHK	4/3/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7	2		0.02	0.1	J 0.0432	mg/L
* Calcium, Total	HRG	4/19/2017	EPA 200.7	10		1.0	5	292	mg/L
* Cadmium, Total	JHK	4/3/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	4/3/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7	2		0.01	0.05	J 0.0493	mg/L
* Molybdenum, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	4/3/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	4/3/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	3/29/2017	SM 2540C	1			125	3980	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.5	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C	1		0.032	0.10	0.32	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E	100		140	500	2700	mg/L

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX06720

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	MB					Limit	Rec	Limit	Prec		
AX06720	Cadmium, Total	mg/L	0.0000121	0.00044	0.10	0.0939	0.0949	0.0983	0.085 to 0.115		93.9	70 to 130	1.06	20
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15		103	70 to 130	1.52	20
AX06720	Mercury, Total by CVAA	mg/L	0.000108	0.0005	0.004	0.00387	0.00390	0.00388	0.0034 to 0.0046		96.7	70 to 130	0.822	20
AX06720	Beryllium, Total	mg/L	0.0000280	0.00132	0.10	0.102	0.104	0.107	0.085 to 0.115		102	70 to 130	2.01	20
AX06720	Chromium, Total	mg/L	0.0000125	0.0044	0.10	0.102	0.103	0.102	0.085 to 0.115		102	70 to 130	1.30	20
AX06720	Cobalt, Total	mg/L	0.00000890	0.0044	0.10	0.100	0.102	0.0921	0.085 to 0.115		100	70 to 130	2.24	20
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75		40.3	70 to 130	0.129	20
AX06720	Arsenic, Total	mg/L	0.0000183	0.0022	0.10	0.100	0.102	0.101	0.085 to 0.115		100	70 to 130	1.52	20
AX06720	Lead, Total	mg/L	0.0000164	0.0022	0.10	0.0840	0.0844	0.104	0.085 to 0.115		84.0	70 to 130	0.495	20
AX06720	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.101	0.103	0.101	0.085 to 0.115		101	70 to 130	1.64	20
AX06720	Selenium, Total	mg/L	0.0000524	0.0044	0.10	0.0947	0.0971	0.0990	0.085 to 0.115		94.7	70 to 130	2.49	20
AX06720	Barium, Total	mg/L	0.000224	0.0044	0.10	0.103	0.105	0.0959	0.085 to 0.115		92.6	70 to 130	2.20	20
AX06720	Thallium, Total	mg/L	0.0000174	0.00044	0.10	0.103	0.104	0.100	0.085 to 0.115		103	70 to 130	1.13	20
AX06720	Antimony, Total	mg/L	0.0000679	0.00132	0.10	0.0905	0.0918	0.0943	0.085 to 0.115		90.5	70 to 130	1.40	20
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23		116	70 to 130	2.33	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Test America Pensacola NELAP ID: E81010

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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX06720

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06724	Solids, Dissolved	mg/L	0.00	25			2140	41.0	40 to 60	2.03	5

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: 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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-4 Dup

Laboratory ID Number: AX06721

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	4/4/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	4/4/2017	EPA 200.8	5			0.0020	0.01		0.0103	mg/L
* Beryllium, Total	JHK	4/4/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7	2			0.02	0.1	J	0.0433	mg/L
* Calcium, Total	HRG	4/19/2017	EPA 200.7	10			1.0	5		299	mg/L
* Cadmium, Total	JHK	4/4/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	4/4/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	4/4/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Chromium, Total	JHK	4/4/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7	2			0.01	0.05	J	0.0492	mg/L
* Molybdenum, Total	JHK	4/4/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	4/4/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	4/4/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	4/4/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	SES	3/27/2017	SM 2540C	1				125		3760	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E	1			0.60	2.00	J	1.5	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C	1			0.032	0.10		0.32	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E	85			120	430		2900	mg/L

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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: WMWGORLF
 Sample Date: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-4 Dup

Laboratory ID Number: AX06721

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB Limit	Rec		Prec	Prec Limit	
			MB	Limit					Rec	Limit			
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23	116	70 to 130	2.33	20
AX06726	Beryllium, Total	mg/L	0.0000292	0.00132	0.10	0.0950	0.0941	0.103	0.085 to 0.115	95.0	70 to 130	0.911	20
AX06726	Cobalt, Total	mg/L	0.00000189	0.0044	0.10	0.0950	0.0933	0.111	0.085 to 0.115	95.0	70 to 130	1.80	20
AX06726	Antimony, Total	mg/L	0.0000488	0.00132	0.10	0.0957	0.0946	0.0947	0.085 to 0.115	95.7	70 to 130	1.17	20
AX06726	Barium, Total	mg/L	0.0000138	0.0044	0.10	0.0903	0.0899	0.0959	0.085 to 0.115	90.3	70 to 130	0.397	20
AX06726	Selenium, Total	mg/L	0.0000405	0.0044	0.10	0.0918	0.0912	0.0991	0.085 to 0.115	91.8	70 to 130	0.738	20
AX06726	Arsenic, Total	mg/L	0.0000143	0.0022	0.10	0.0942	0.0940	0.102	0.085 to 0.115	94.2	70 to 130	0.173	20
AX06726	Chromium, Total	mg/L	0.0000163	0.0044	0.10	0.101	0.0993	0.104	0.085 to 0.115	101	70 to 130	1.57	20
AX06726	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00391	0.00383	0.00390	0.0034 to 0.0046	97.8	70 to 130	2.08	20
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75	40.3	70 to 130	0.129	20
AX06726	Cadmium, Total	mg/L	0.00000390	0.00044	0.10	0.0938	0.0925	0.102	0.085 to 0.115	93.8	70 to 130	1.33	20
AX06726	Molybdenum, Total	mg/L	0.00000829	0.0044	0.10	0.0950	0.0934	0.0963	0.085 to 0.115	95.0	70 to 130	1.73	20
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15	103	70 to 130	1.52	20
AX06726	Lead, Total	mg/L	0.0000243	0.0022	0.10	0.0812	0.0816	0.102	0.085 to 0.115	81.2	70 to 130	0.471	20
AX06726	Thallium, Total	mg/L	0.0000223	0.00044	0.10	0.0979	0.0969	0.0995	0.085 to 0.115	97.9	70 to 130	1.08	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-4 Dup

Laboratory ID Number: AX06721

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06721	Solids, Dissolved	mg/L	5.00	25			3850	58.0	40 to 60	1.12	5

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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX06722

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	JHK	4/3/2017	EPA 200.8		5	0.0010	0.005	J	0.00122	mg/L
* Barium, Total	JHK	4/3/2017	EPA 200.8		5	0.0020	0.01	J	0.00991	mg/L
* Beryllium, Total	JHK	4/3/2017	EPA 200.8		5	0.00060	0.003		0.00686	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7		2	0.02	0.1	J	0.0344	mg/L
* Calcium, Total	HRG	4/19/2017	EPA 200.7		10	1.0	5		318	mg/L
* Cadmium, Total	JHK	4/3/2017	EPA 200.8		5	0.00020	0.001		0.00473	mg/L
* Antimony, Total	JHK	4/3/2017	EPA 200.8		5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	4/3/2017	EPA 200.8		5	0.0020	0.01		0.271	mg/L
* Chromium, Total	JHK	4/3/2017	EPA 200.8		5	0.0020	0.01	J	0.00945	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1		1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7		2	0.01	0.05		0.203	mg/L
* Molybdenum, Total	JHK	4/3/2017	EPA 200.8		5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	4/3/2017	EPA 200.8		5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	4/3/2017	EPA 200.8		5	0.0020	0.01		0.0141	mg/L
* Thallium, Total	JHK	4/3/2017	EPA 200.8		5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	DLJ	3/29/2017	SM 2540C		1		125		4180	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E		1	0.60	2.00		2.0	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C		1	0.032	0.10		0.41	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E		100	140	500		3200	mg/L

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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: WMWGORLF
 Sample Date: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX06722

Sample	Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AX06720	Cadmium, Total	mg/L	0.0000121	0.00044	0.10	0.0939	0.0949	0.0983	0.085 to 0.115	93.9	70 to 130	1.06	20	
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15	103	70 to 130	1.52	20	
AX06720	Mercury, Total by CVAA	mg/L	0.000108	0.0005	0.004	0.00387	0.00390	0.00388	0.0034 to 0.0046	96.7	70 to 130	0.822	20	
AX06720	Antimony, Total	mg/L	0.0000679	0.00132	0.10	0.0905	0.0918	0.0943	0.085 to 0.115	90.5	70 to 130	1.40	20	
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23	116	70 to 130	2.33	20	
AX06720	Arsenic, Total	mg/L	0.0000183	0.0022	0.10	0.100	0.102	0.101	0.085 to 0.115	100	70 to 130	1.52	20	
AX06720	Lead, Total	mg/L	0.0000164	0.0022	0.10	0.0840	0.0844	0.104	0.085 to 0.115	84.0	70 to 130	0.495	20	
AX06720	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	1.64	20	
AX06720	Selenium, Total	mg/L	0.0000524	0.0044	0.10	0.0947	0.0971	0.0990	0.085 to 0.115	94.7	70 to 130	2.49	20	
AX06720	Beryllium, Total	mg/L	0.0000280	0.00132	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	2.01	20	
AX06720	Chromium, Total	mg/L	0.0000125	0.0044	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	1.30	20	
AX06720	Cobalt, Total	mg/L	0.00000890	0.0044	0.10	0.100	0.102	0.0921	0.085 to 0.115	100	70 to 130	2.24	20	
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75	40.3	70 to 130	0.129	20	
AX06720	Barium, Total	mg/L	0.000224	0.0044	0.10	0.103	0.105	0.0959	0.085 to 0.115	92.6	70 to 130	2.20	20	
AX06720	Thallium, Total	mg/L	0.0000174	0.00044	0.10	0.103	0.104	0.100	0.085 to 0.115	103	70 to 130	1.13	20	

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 Calera, AL 35040
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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX06722

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06724	Solids, Dissolved	mg/L	0.00	25			2140	41.0	40 to 60	2.03	5

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 Calera, AL 35040
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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX06723

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	4/3/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	0.0132	mg/L
* Beryllium, Total	JHK	4/3/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7	2		0.02	0.1	J 0.0243	mg/L
* Calcium, Total	HRG	4/19/2017	EPA 200.7	10		1.0	5	155	mg/L
* Cadmium, Total	JHK	4/3/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	4/3/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	0.0328	mg/L
* Chromium, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7	2		0.01	0.05	J 0.0464	mg/L
* Molybdenum, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	4/3/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	4/3/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	3/29/2017	SM 2540C	1			100	1510	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E	1		0.60	2.00	3.0	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C	1		0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E	60		84.0	300	B 900	mg/L

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX06723

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	MB					Limit	Rec	Limit	Prec		
AX06720	Cadmium, Total	mg/L	0.0000121	0.00044	0.10	0.0939	0.0949	0.0983	0.085 to 0.115		93.9	70 to 130	1.06	20
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15		103	70 to 130	1.52	20
AX06720	Mercury, Total by CVAA	mg/L	0.000108	0.0005	0.004	0.00387	0.00390	0.00388	0.0034 to 0.0046		96.7	70 to 130	0.822	20
AX06720	Antimony, Total	mg/L	0.0000679	0.00132	0.10	0.0905	0.0918	0.0943	0.085 to 0.115		90.5	70 to 130	1.40	20
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23		116	70 to 130	2.33	20
AX06720	Arsenic, Total	mg/L	0.0000183	0.0022	0.10	0.100	0.102	0.101	0.085 to 0.115		100	70 to 130	1.52	20
AX06720	Lead, Total	mg/L	0.0000164	0.0022	0.10	0.0840	0.0844	0.104	0.085 to 0.115		84.0	70 to 130	0.495	20
AX06720	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.101	0.103	0.101	0.085 to 0.115		101	70 to 130	1.64	20
AX06720	Selenium, Total	mg/L	0.0000524	0.0044	0.10	0.0947	0.0971	0.0990	0.085 to 0.115		94.7	70 to 130	2.49	20
AX06720	Barium, Total	mg/L	0.000224	0.0044	0.10	0.103	0.105	0.0959	0.085 to 0.115		92.6	70 to 130	2.20	20
AX06720	Thallium, Total	mg/L	0.0000174	0.00044	0.10	0.103	0.104	0.100	0.085 to 0.115		103	70 to 130	1.13	20
AX06720	Beryllium, Total	mg/L	0.0000280	0.00132	0.10	0.102	0.104	0.107	0.085 to 0.115		102	70 to 130	2.01	20
AX06720	Chromium, Total	mg/L	0.0000125	0.0044	0.10	0.102	0.103	0.102	0.085 to 0.115		102	70 to 130	1.30	20
AX06720	Cobalt, Total	mg/L	0.00000890	0.0044	0.10	0.100	0.102	0.0921	0.085 to 0.115		100	70 to 130	2.24	20
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75		40.3	70 to 130	0.129	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX06723

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06724	Solids, Dissolved	mg/L	0.00	25			2140	41.0	40 to 60	2.03	5

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: 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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX06724

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	4/3/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	J 0.00938	mg/L
* Beryllium, Total	JHK	4/3/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7	2		0.02	0.1	J 0.0224	mg/L
* Calcium, Total	HRG	4/19/2017	EPA 200.7	10		1.0	5	141	mg/L
* Cadmium, Total	JHK	4/3/2017	EPA 200.8	5		0.00020	0.001	0.00190	mg/L
* Antimony, Total	JHK	4/3/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	0.0535	mg/L
* Chromium, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7	2		0.01	0.05	J 0.0238	mg/L
* Molybdenum, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	4/3/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	4/3/2017	EPA 200.8	5		0.0020	0.01	J 0.00220	mg/L
* Thallium, Total	JHK	4/3/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	3/29/2017	SM 2540C	1			125	2060	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E	1		0.60	2.00	2.4	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C	1		0.032	0.10	0.12	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E	50		70.0	250	B 1500	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Test America Pensacola NELAP ID: E81010
 Recovery for Calcium was out of spec.
 The spike amount was less than 30% of the sample amount. SGC 6/12/17

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-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX06724

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15	103	70 to 130	1.52	20
AX06720	Mercury, Total by CVAA	mg/L	0.000108	0.0005	0.004	0.00387	0.00390	0.00388	0.0034 to 0.0046	96.7	70 to 130	0.822	20
AX06720	Cadmium, Total	mg/L	0.0000121	0.00044	0.10	0.0939	0.0949	0.0983	0.085 to 0.115	93.9	70 to 130	1.06	20
AX06720	Barium, Total	mg/L	0.000224	0.0044	0.10	0.103	0.105	0.0959	0.085 to 0.115	92.6	70 to 130	2.20	20
AX06720	Thallium, Total	mg/L	0.0000174	0.00044	0.10	0.103	0.104	0.100	0.085 to 0.115	103	70 to 130	1.13	20
AX06720	Antimony, Total	mg/L	0.0000679	0.00132	0.10	0.0905	0.0918	0.0943	0.085 to 0.115	90.5	70 to 130	1.40	20
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23	116	70 to 130	2.33	20
AX06720	Arsenic, Total	mg/L	0.0000183	0.0022	0.10	0.100	0.102	0.101	0.085 to 0.115	100	70 to 130	1.52	20
AX06720	Lead, Total	mg/L	0.0000164	0.0022	0.10	0.0840	0.0844	0.104	0.085 to 0.115	84.0	70 to 130	0.495	20
AX06720	Molybdenum, Total	mg/L	0.0000151	0.0044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	1.64	20
AX06720	Selenium, Total	mg/L	0.0000524	0.0044	0.10	0.0947	0.0971	0.0990	0.085 to 0.115	94.7	70 to 130	2.49	20
AX06720	Beryllium, Total	mg/L	0.0000280	0.00132	0.10	0.102	0.104	0.107	0.085 to 0.115	102	70 to 130	2.01	20
AX06720	Chromium, Total	mg/L	0.0000125	0.0044	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	1.30	20
AX06720	Cobalt, Total	mg/L	0.00000890	0.0044	0.10	0.100	0.102	0.0921	0.085 to 0.115	100	70 to 130	2.24	20
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75	40.3	70 to 130	0.129	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Test America Pensacola NELAP ID: E81010
 Recovery for Calcium was out of spec.
 The spike amount was less than 30% of the sample amount. SGC 6/12/17

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-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX06724

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06724	Solids, Dissolved	mg/L	0.00	25			2140	41.0	40 to 60	2.03	5

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Expiration: June 30, 2017

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 Recovery for Calcium was out of spec.
 The spike amount was less than 30% of the sample amount. SGC 6/12/17

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-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX06725

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	4/14/2017	EPA 200.7	2		0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7	2		0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	3/29/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX06725

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23	116	70 to 130	2.33	20
AX06726	Cobalt, Total	mg/L	0.00000189	0.0044	0.10	0.0950	0.0933	0.111	0.085 to 0.115	95.0	70 to 130	1.80	20
AX06726	Beryllium, Total	mg/L	0.0000292	0.00132	0.10	0.0950	0.0941	0.103	0.085 to 0.115	95.0	70 to 130	0.911	20
AX06726	Arsenic, Total	mg/L	0.0000143	0.0022	0.10	0.0942	0.0940	0.102	0.085 to 0.115	94.2	70 to 130	0.173	20
AX06726	Chromium, Total	mg/L	0.0000163	0.0044	0.10	0.101	0.0993	0.104	0.085 to 0.115	101	70 to 130	1.57	20
AX06726	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00391	0.00383	0.00390	0.0034 to 0.0046	97.8	70 to 130	2.08	20
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75	40.3	70 to 130	0.129	20
AX06726	Cadmium, Total	mg/L	0.00000390	0.00044	0.10	0.0938	0.0925	0.102	0.085 to 0.115	93.8	70 to 130	1.33	20
AX06726	Molybdenum, Total	mg/L	0.00000829	0.0044	0.10	0.0950	0.0934	0.0963	0.085 to 0.115	95.0	70 to 130	1.73	20
AX06726	Antimony, Total	mg/L	0.0000488	0.00132	0.10	0.0957	0.0946	0.0947	0.085 to 0.115	95.7	70 to 130	1.17	20
AX06726	Barium, Total	mg/L	0.0000138	0.0044	0.10	0.0903	0.0899	0.0959	0.085 to 0.115	90.3	70 to 130	0.397	20
AX06726	Selenium, Total	mg/L	0.0000405	0.0044	0.10	0.0918	0.0912	0.0991	0.085 to 0.115	91.8	70 to 130	0.738	20
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15	103	70 to 130	1.52	20
AX06726	Lead, Total	mg/L	0.0000243	0.0022	0.10	0.0812	0.0816	0.102	0.085 to 0.115	81.2	70 to 130	0.471	20
AX06726	Thallium, Total	mg/L	0.0000223	0.00044	0.10	0.0979	0.0969	0.0995	0.085 to 0.115	97.9	70 to 130	1.08	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Test America Pensacola NELAP ID: E81010

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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX06725

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06724	Solids, Dissolved	mg/L	0.00	25			2140	41.0	40 to 60	2.03	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Test America Pensacola NELAP ID: E81010

CC:

Alabama Power General Test Laboratory
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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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX06726

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	4/14/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	4/14/2017	EPA 200.7	2		0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	4/4/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	5/17/2017	EPA 200.7	2		0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	4/4/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	4/4/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	4/4/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	DLJ	3/29/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	4/17/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	4/17/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	4/17/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX06726

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX06724	Lithium, Total	mg/L	-0.000190	0.022	0.20	0.256	0.262	0.187	0.17 to 0.23	116	70 to 130	2.33	20
AX06726	Beryllium, Total	mg/L	0.0000292	0.00132	0.10	0.0950	0.0941	0.103	0.085 to 0.115	95.0	70 to 130	0.911	20
AX06726	Cobalt, Total	mg/L	0.00000189	0.0044	0.10	0.0950	0.0933	0.111	0.085 to 0.115	95.0	70 to 130	1.80	20
AX06726	Antimony, Total	mg/L	0.0000488	0.00132	0.10	0.0957	0.0946	0.0947	0.085 to 0.115	95.7	70 to 130	1.17	20
AX06726	Barium, Total	mg/L	0.0000138	0.0044	0.10	0.0903	0.0899	0.0959	0.085 to 0.115	90.3	70 to 130	0.397	20
AX06726	Selenium, Total	mg/L	0.0000405	0.0044	0.10	0.0918	0.0912	0.0991	0.085 to 0.115	91.8	70 to 130	0.738	20
AX06724	Boron, Total	mg/L	0.000255	0.044	1.00	1.05	1.03	0.982	0.85 to 1.15	103	70 to 130	1.52	20
AX06726	Lead, Total	mg/L	0.0000243	0.0022	0.10	0.0812	0.0816	0.102	0.085 to 0.115	81.2	70 to 130	0.471	20
AX06726	Thallium, Total	mg/L	0.0000223	0.00044	0.10	0.0979	0.0969	0.0995	0.085 to 0.115	97.9	70 to 130	1.08	20
AX06726	Arsenic, Total	mg/L	0.0000143	0.0022	0.10	0.0942	0.0940	0.102	0.085 to 0.115	94.2	70 to 130	0.173	20
AX06726	Chromium, Total	mg/L	0.0000163	0.0044	0.10	0.101	0.0993	0.104	0.085 to 0.115	101	70 to 130	1.57	20
AX06726	Mercury, Total by CVAA	mg/L	0.000115	0.0005	0.004	0.00391	0.00383	0.00390	0.0034 to 0.0046	97.8	70 to 130	2.08	20
AX06724	Calcium, Total	mg/L	-0.000469	0.22	5.00	143	143	5.00	4.25 to 5.75	40.3	70 to 130	0.129	20
AX06726	Cadmium, Total	mg/L	0.00000390	0.00044	0.10	0.0938	0.0925	0.102	0.085 to 0.115	93.8	70 to 130	1.33	20
AX06726	Molybdenum, Total	mg/L	0.00000829	0.0044	0.10	0.0950	0.0934	0.0963	0.085 to 0.115	95.0	70 to 130	1.73	20

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: 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: 22-Mar-17
 Customer ID:
 Delivery Date: 23-Mar-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX06726

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX06724	Solids, Dissolved	mg/L	0.00	25			2140	41.0	40 to 60	2.03	5

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

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

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Test America Pensacola NELAP ID: E81010

CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 03/23/2017 08:30

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="Ben Rothschadl"/>	Location	<input type="text" value="Gorgas Landfill"/>
Analysis Requested	<input type="text" value="Bottle 1 (500mL): Metals, Bottle 2 (250mL): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions"/>		
Comments	<input type="text" value="All anions outsourced to Test America, Pensacola."/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-12	03/21/2017	12:37	4	Groundwater		AX06717
MW-11	03/21/2017	13:50	4	Groundwater		AX06718
MW-10	03/21/2017	16:00	4	Groundwater		AX06719
MW-4	03/22/2017	09:22	4	Groundwater		AX06720
MW-4 DUP	03/22/2017	09:22	4	Sample Duplicate		AX06721
MW-3	03/22/2017	11:10	4	Groundwater		AX06722
MW-2	03/22/2017	12:35	4	Groundwater		AX06723
MW-1	03/22/2017	13:47	4	Groundwater		AX06724
FB-1	03/22/2017	14:10	4	Field Blank		AX06725
EB-1	03/22/2017	14:20	4	Equipment Blank		AX06726

Relinquished By	Received By	Date/Time
<input type="text" value="Benjamin Rothschadl"/> <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=X2B7R0TH@southernco.com, c=US Date: 2017.03.23 07:39:35 -0500</small>	<input type="text" value="Sarah Copeland"/> <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o, ou, email=sgcopela@southernco.com, c=US Date: 2017.03.23 09:01:54 -0500</small>	<input type="text" value="03/23/2017 09:01"/>

SmarTroll ID <input type="text" value="4696-23441-1-1"/>	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID <input type="text" value="3901-20010-2-2"/>	Cooler Temp <input type="text" value="2.5 degrees C"/>
	Thermometer ID <input type="text" value="5408-27568-2-2"/>
	pH Strip ID <input type="text" value="5521-28268-20-12"/>

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: 400-135678-2

TestAmerica Sample Delivery Group: Gorgas Landfill (7)

Client Project/Site: CCR Plant Gorgas

For:

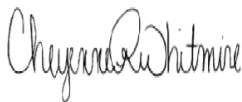
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

4/14/2017 6:11:04 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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results through

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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: 400-135678-2
SDG: Gorgas Landfill (7)

Job ID: 400-135678-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-135678-2

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 348061 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 348438 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: AX06704 MW-2 (400-135678-8), AX06705 MW-3 (400-135678-9), AX06706 MW-4 (400-135678-10), AX06717 MW-12 (400-135678-11) and AX06721 MW-4 DUP (400-135678-14). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The method blank associated with analytical batch 348054 contained Sulfate less than one-half the reporting limit (RL). The sample results have been qualified and reported.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 349656 were outside control limits. Sample matrix interference is 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: 400-135678-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06724 MW-1

Lab Sample ID: 400-135678-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4		2.0	0.60	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	B	250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX06723 MW-2

Lab Sample ID: 400-135678-8

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	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	900	B	300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX06722 MW-3

Lab Sample ID: 400-135678-9

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	0.41		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	3200		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

Client Sample ID: AX06720 MW-4

Lab Sample ID: 400-135678-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5	J	2.0	0.60	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	2700		500	140	mg/L	100		SM 4500 SO4 E	Total/NA

Client Sample ID: AX06717 MW-12

Lab Sample ID: 400-135678-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.090	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2400		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX06718 MW-11

Lab Sample ID: 400-135678-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.080	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1900		280	77	mg/L	55		SM 4500 SO4 E	Total/NA

Client Sample ID: AX06719 MW-10

Lab Sample ID: 400-135678-13

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	0.15		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	660		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX06721 MW-4 DUP

Lab Sample ID: 400-135678-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5	J	2.0	0.60	mg/L	1		SM 4500 Cl- 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: 400-135678-2
SDG: Gorgas Landfill (7)

Client Sample ID: AX06721 MW-4 DUP (Continued)

Lab Sample ID: 400-135678-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.32		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2900	F1	430	120	mg/L	85		SM 4500 SO4 E	Total/NA

Client Sample ID: AX06725 FB-1

Lab Sample ID: 400-135678-15

No Detections.

Client Sample ID: AX06726 EB-1

Lab Sample ID: 400-135678-16

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: 400-135678-2
SDG: Gorgas Landfill (7)

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



Sample Summary

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

TestAmerica Job ID: 400-135678-2
SDG: Gorgas Landfill (7)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-135678-7	AX06724 MW-1	Water	03/22/17 13:47	03/27/17 08:34
400-135678-8	AX06723 MW-2	Water	03/22/17 12:35	03/27/17 08:34
400-135678-9	AX06722 MW-3	Water	03/22/17 11:10	03/27/17 08:34
400-135678-10	AX06720 MW-4	Water	03/22/17 09:22	03/27/17 08:34
400-135678-11	AX06717 MW-12	Water	03/21/17 12:37	03/27/17 08:34
400-135678-12	AX06718 MW-11	Water	03/21/17 13:50	03/27/17 08:34
400-135678-13	AX06719 MW-10	Water	03/21/17 16:00	03/27/17 08:34
400-135678-14	AX06721 MW-4 DUP	Water	03/22/17 09:22	03/27/17 08:34
400-135678-15	AX06725 FB-1	Water	03/22/17 14:10	03/27/17 08:34
400-135678-16	AX06726 EB-1	Water	03/22/17 14:20	03/27/17 08:34



Client Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06724 MW-1

Lab Sample ID: 400-135678-7

Date Collected: 03/22/17 13:47

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.4		2.0	0.60	mg/L			04/06/17 17:39	1
Fluoride	0.12		0.10	0.032	mg/L			04/01/17 11:52	1
Sulfate	1500	B	250	70	mg/L			04/01/17 10:16	50

Client Sample ID: AX06723 MW-2

Lab Sample ID: 400-135678-8

Date Collected: 03/22/17 12:35

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.0		2.0	0.60	mg/L			04/06/17 17:39	1
Fluoride	0.13		0.10	0.032	mg/L			04/01/17 11:54	1
Sulfate	900	B	300	84	mg/L			04/01/17 10:16	60

Client Sample ID: AX06722 MW-3

Lab Sample ID: 400-135678-9

Date Collected: 03/22/17 11:10

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			04/05/17 08:39	1
Fluoride	0.41		0.10	0.032	mg/L			04/03/17 16:21	1
Sulfate	3200		500	140	mg/L			04/13/17 11:48	100

Client Sample ID: AX06720 MW-4

Lab Sample ID: 400-135678-10

Date Collected: 03/22/17 09:22

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5	J	2.0	0.60	mg/L			04/05/17 08:39	1
Fluoride	0.32		0.10	0.032	mg/L			04/03/17 16:23	1
Sulfate	2700		500	140	mg/L			04/13/17 11:51	100

Client Sample ID: AX06717 MW-12

Lab Sample ID: 400-135678-11

Date Collected: 03/21/17 12:37

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		2.0	0.60	mg/L			04/04/17 14:49	1
Fluoride	0.090	J	0.10	0.032	mg/L			04/03/17 16:25	1
Sulfate	2400		350	98	mg/L			04/13/17 09:41	70

Client Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06718 MW-11

Lab Sample ID: 400-135678-12

Date Collected: 03/21/17 13:50

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		2.0	0.60	mg/L			04/12/17 09:53	1
Fluoride	0.080	J	0.10	0.032	mg/L			04/03/17 16:27	1
Sulfate	1900		280	77	mg/L			04/13/17 11:48	55

Client Sample ID: AX06719 MW-10

Lab Sample ID: 400-135678-13

Date Collected: 03/21/17 16:00

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6	J	2.0	0.60	mg/L			04/04/17 14:49	1
Fluoride	0.15		0.10	0.032	mg/L			04/03/17 16:29	1
Sulfate	660		250	70	mg/L			04/13/17 09:13	50

Client Sample ID: AX06721 MW-4 DUP

Lab Sample ID: 400-135678-14

Date Collected: 03/22/17 09:22

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5	J	2.0	0.60	mg/L			04/05/17 16:03	1
Fluoride	0.32		0.10	0.032	mg/L			04/03/17 15:36	1
Sulfate	2900	F1	430	120	mg/L			04/13/17 16:19	85

Client Sample ID: AX06725 FB-1

Lab Sample ID: 400-135678-15

Date Collected: 03/22/17 14:10

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			04/05/17 08:41	1
Fluoride	<0.032		0.10	0.032	mg/L			04/07/17 12:22	1
Sulfate	<1.4		5.0	1.4	mg/L			04/13/17 11:44	1

Client Sample ID: AX06726 EB-1

Lab Sample ID: 400-135678-16

Date Collected: 03/22/17 14:20

Matrix: Water

Date Received: 03/27/17 08:34

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			04/05/17 08:41	1
Fluoride	<0.032		0.10	0.032	mg/L			04/07/17 15:26	1
Sulfate	<1.4		5.0	1.4	mg/L			04/13/17 11:07	1

Definitions/Glossary

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

TestAmerica Job ID: 400-135678-2
SDG: Gorgas Landfill (7)

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F2	MS/MSD RPD exceeds control limits

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: 400-135678-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06724 MW-1

Lab Sample ID: 400-135678-7

Date Collected: 03/22/17 13:47

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	348793	04/06/17 17:39	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348061	04/01/17 11:52	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	348054	04/01/17 10:16	BJB	TAL PEN

Client Sample ID: AX06723 MW-2

Lab Sample ID: 400-135678-8

Date Collected: 03/22/17 12:35

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	348793	04/06/17 17:39	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348061	04/01/17 11:54	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	348054	04/01/17 10:16	BJB	TAL PEN

Client Sample ID: AX06722 MW-3

Lab Sample ID: 400-135678-9

Date Collected: 03/22/17 11:10

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	348485	04/05/17 08:39	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348269	04/03/17 16:21	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	349600	04/13/17 11:48	BJB	TAL PEN

Client Sample ID: AX06720 MW-4

Lab Sample ID: 400-135678-10

Date Collected: 03/22/17 09:22

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	348485	04/05/17 08:39	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348269	04/03/17 16:23	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	349600	04/13/17 11:51	BJB	TAL PEN

Client Sample ID: AX06717 MW-12

Lab Sample ID: 400-135678-11

Date Collected: 03/21/17 12:37

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	348438	04/04/17 14:49	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348269	04/03/17 16:25	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	349553	04/13/17 09:41	BJB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06718 MW-11

Lab Sample ID: 400-135678-12

Date Collected: 03/21/17 13:50

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	349400	04/12/17 09:53	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348269	04/03/17 16:27	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		55	349600	04/13/17 11:48	BJB	TAL PEN

Client Sample ID: AX06719 MW-10

Lab Sample ID: 400-135678-13

Date Collected: 03/21/17 16:00

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	348438	04/04/17 14:49	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348269	04/03/17 16:29	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	349553	04/13/17 09:13	BJB	TAL PEN

Client Sample ID: AX06721 MW-4 DUP

Lab Sample ID: 400-135678-14

Date Collected: 03/22/17 09:22

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	348613	04/05/17 16:03	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348269	04/03/17 15:36	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		85	349656	04/13/17 16:19	BJB	TAL PEN

Client Sample ID: AX06725 FB-1

Lab Sample ID: 400-135678-15

Date Collected: 03/22/17 14:10

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	348485	04/05/17 08:41	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348938	04/07/17 12:22	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349600	04/13/17 11:44	BJB	TAL PEN

Client Sample ID: AX06726 EB-1

Lab Sample ID: 400-135678-16

Date Collected: 03/22/17 14:20

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	348485	04/05/17 08:41	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348938	04/07/17 15:26	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349600	04/13/17 11:07	BJB	TAL PEN

Laboratory References:

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

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

General Chemistry

Analysis Batch: 348054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-7	AX06724 MW-1	Total/NA	Water	SM 4500 SO4 E	
400-135678-8	AX06723 MW-2	Total/NA	Water	SM 4500 SO4 E	
MB 400-348054/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-348054/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-348054/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-135676-A-7 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-135676-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 348061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-7	AX06724 MW-1	Total/NA	Water	SM 4500 F C	
400-135678-8	AX06723 MW-2	Total/NA	Water	SM 4500 F C	
MB 400-348061/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-348061/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-135678-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-135678-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 348269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-9	AX06722 MW-3	Total/NA	Water	SM 4500 F C	
400-135678-10	AX06720 MW-4	Total/NA	Water	SM 4500 F C	
400-135678-11	AX06717 MW-12	Total/NA	Water	SM 4500 F C	
400-135678-12	AX06718 MW-11	Total/NA	Water	SM 4500 F C	
400-135678-13	AX06719 MW-10	Total/NA	Water	SM 4500 F C	
400-135678-14	AX06721 MW-4 DUP	Total/NA	Water	SM 4500 F C	
MB 400-348269/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-348269/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-135678-14 MS	AX06721 MW-4 DUP	Total/NA	Water	SM 4500 F C	
400-135678-14 MSD	AX06721 MW-4 DUP	Total/NA	Water	SM 4500 F C	
400-135676-A-3 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 348438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-11	AX06717 MW-12	Total/NA	Water	SM 4500 Cl- E	
400-135678-13	AX06719 MW-10	Total/NA	Water	SM 4500 Cl- E	
MB 400-348438/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-348438/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-348438/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 348485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-9	AX06722 MW-3	Total/NA	Water	SM 4500 Cl- E	
400-135678-10	AX06720 MW-4	Total/NA	Water	SM 4500 Cl- E	
400-135678-15	AX06725 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-135678-16	AX06726 EB-1	Total/NA	Water	SM 4500 Cl- E	
MB 400-348485/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-348485/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-348485/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-135675-A-10 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-135675-A-10 MSD	Matrix Spike Duplicate	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: 400-135678-2
SDG: Gorgas Landfill (7)

General Chemistry (Continued)

Analysis Batch: 348613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-14	AX06721 MW-4 DUP	Total/NA	Water	SM 4500 Cl- E	
MB 400-348613/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-348613/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-348613/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-135678-14 MS	AX06721 MW-4 DUP	Total/NA	Water	SM 4500 Cl- E	
400-135678-14 MSD	AX06721 MW-4 DUP	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 348793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-7	AX06724 MW-1	Total/NA	Water	SM 4500 Cl- E	
400-135678-8	AX06723 MW-2	Total/NA	Water	SM 4500 Cl- E	
MB 400-348793/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-348793/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-348793/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-135900-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-135900-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 348938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-15	AX06725 FB-1	Total/NA	Water	SM 4500 F C	
400-135678-16	AX06726 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-348938/6	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-348938/7	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-135675-A-17 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-135675-A-17 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-135675-A-21 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-135675-A-21 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 349400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-12	AX06718 MW-11	Total/NA	Water	SM 4500 Cl- E	
MB 400-349400/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-349400/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-349400/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-135678-12 MS	AX06718 MW-11	Total/NA	Water	SM 4500 Cl- E	
400-135678-12 MSD	AX06718 MW-11	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 349553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-11	AX06717 MW-12	Total/NA	Water	SM 4500 SO4 E	
400-135678-13	AX06719 MW-10	Total/NA	Water	SM 4500 SO4 E	
MB 400-349553/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-349553/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-349553/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-135676-A-13 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-135676-A-13 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 349600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-9	AX06722 MW-3	Total/NA	Water	SM 4500 SO4 E	
400-135678-10	AX06720 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: 400-135678-2
SDG: Gorgas Landfill (7)

General Chemistry (Continued)

Analysis Batch: 349600 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-12	AX06718 MW-11	Total/NA	Water	SM 4500 SO4 E	
400-135678-15	AX06725 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-135678-16	AX06726 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-349600/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-349600/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-349600/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-135678-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-135678-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 349656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135678-14	AX06721 MW-4 DUP	Total/NA	Water	SM 4500 SO4 E	
MB 400-349656/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-349656/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-349656/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-135678-14 MS	AX06721 MW-4 DUP	Total/NA	Water	SM 4500 SO4 E	
400-135678-14 MSD	AX06721 MW-4 DUP	Total/NA	Water	SM 4500 SO4 E	

QC Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-348438/6
Matrix: Water
Analysis Batch: 348438

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			04/04/17 13:22	1

Lab Sample ID: LCS 400-348438/7
Matrix: Water
Analysis Batch: 348438

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	31.6		mg/L		105	90 - 110

Lab Sample ID: MRL 400-348438/3
Matrix: Water
Analysis Batch: 348438

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	1.83	J	mg/L		92	50 - 150

Lab Sample ID: MB 400-348485/6
Matrix: Water
Analysis Batch: 348485

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			04/05/17 08:14	1

Lab Sample ID: LCS 400-348485/7
Matrix: Water
Analysis Batch: 348485

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	31.7		mg/L		106	90 - 110

Lab Sample ID: MRL 400-348485/3
Matrix: Water
Analysis Batch: 348485

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	1.17	J	mg/L		59	50 - 150

Lab Sample ID: 400-135675-A-10 MS
Matrix: Water
Analysis Batch: 348485

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	49		10.0	57.9	4	mg/L		88	73 - 120

Lab Sample ID: 400-135675-A-10 MSD
Matrix: Water
Analysis Batch: 348485

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	49		10.0	58.0	4	mg/L		89	73 - 120	0	8

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Lab Sample ID: MB 400-348613/6
Matrix: Water
Analysis Batch: 348613

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			04/05/17 15:28	1

Lab Sample ID: LCS 400-348613/7
Matrix: Water
Analysis Batch: 348613

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	31.6		mg/L		105	90 - 110

Lab Sample ID: MRL 400-348613/3
Matrix: Water
Analysis Batch: 348613

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	1.52	J	mg/L		76	50 - 150

Lab Sample ID: 400-135678-14 MS
Matrix: Water
Analysis Batch: 348613

Client Sample ID: AX06721 MW-4 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.5	J	10.0	12.5		mg/L		110	73 - 120

Lab Sample ID: 400-135678-14 MSD
Matrix: Water
Analysis Batch: 348613

Client Sample ID: AX06721 MW-4 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.5	J	10.0	12.5		mg/L		109	73 - 120	0	8

Lab Sample ID: MB 400-348793/6
Matrix: Water
Analysis Batch: 348793

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			04/06/17 17:03	1

Lab Sample ID: LCS 400-348793/7
Matrix: Water
Analysis Batch: 348793

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	31.9		mg/L		106	90 - 110

Lab Sample ID: MRL 400-348793/3
Matrix: Water
Analysis Batch: 348793

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

QC Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-135900-A-4 MS
Matrix: Water
Analysis Batch: 348793

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	48		10.0	56.1	4	mg/L		78	73 - 120

Lab Sample ID: 400-135900-A-4 MSD
Matrix: Water
Analysis Batch: 348793

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
Chloride	48		10.0	55.6	4	mg/L		74	73 - 120	1	8

Lab Sample ID: MB 400-349400/6
Matrix: Water
Analysis Batch: 349400

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			04/12/17 09:06	1

Lab Sample ID: LCS 400-349400/7
Matrix: Water
Analysis Batch: 349400

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	31.4		mg/L		105	90 - 110

Lab Sample ID: MRL 400-349400/3
Matrix: Water
Analysis Batch: 349400

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	2.69		mg/L		134	50 - 150

Lab Sample ID: 400-135678-12 MS
Matrix: Water
Analysis Batch: 349400

Client Sample ID: AX06718 MW-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.5		10.0	14.4		mg/L		119	73 - 120

Lab Sample ID: 400-135678-12 MSD
Matrix: Water
Analysis Batch: 349400

Client Sample ID: AX06718 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	2.5		10.0	14.3		mg/L		118	73 - 120	1	8

QC Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-348061/3
Matrix: Water
Analysis Batch: 348061

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			04/01/17 10:25	1

Lab Sample ID: LCS 400-348061/4
Matrix: Water
Analysis Batch: 348061

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	4.22		mg/L		106	90 - 110

Lab Sample ID: 400-135678-A-4 MS
Matrix: Water
Analysis Batch: 348061

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
Fluoride	0.54	F2	1.00	1.53		mg/L		99	75 - 125

Lab Sample ID: 400-135678-A-4 MSD
Matrix: Water
Analysis Batch: 348061

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
Fluoride	0.54	F2	1.00	1.44	F2	mg/L		90	75 - 125	6	4

Lab Sample ID: MB 400-348269/3
Matrix: Water
Analysis Batch: 348269

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			04/03/17 15:28	1

Lab Sample ID: LCS 400-348269/4
Matrix: Water
Analysis Batch: 348269

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	4.05		mg/L		101	90 - 110

Lab Sample ID: 400-135678-14 MS
Matrix: Water
Analysis Batch: 348269

Client Sample ID: AX06721 MW-4 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.32		1.00	1.24		mg/L		92	75 - 125

Lab Sample ID: 400-135678-14 MSD
Matrix: Water
Analysis Batch: 348269

Client Sample ID: AX06721 MW-4 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	0.32		1.00	1.26		mg/L		94	75 - 125	2	4

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Lab Sample ID: 400-135676-A-3 DU
Matrix: Water
Analysis Batch: 348269

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

Lab Sample ID: MB 400-348938/6
Matrix: Water
Analysis Batch: 348938

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			04/07/17 12:03	1

Lab Sample ID: LCS 400-348938/7
Matrix: Water
Analysis Batch: 348938

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	4.05		mg/L		101	90 - 110

Lab Sample ID: 400-135675-A-17 MS
Matrix: Water
Analysis Batch: 348938

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
Fluoride	0.050	J	1.00	1.08		mg/L		103	75 - 125

Lab Sample ID: 400-135675-A-17 MSD
Matrix: Water
Analysis Batch: 348938

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
Fluoride	0.050	J	1.00	1.08		mg/L		103	75 - 125	0	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-348054/6
Matrix: Water
Analysis Batch: 348054

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.52	J	5.0	1.4	mg/L			04/01/17 07:44	1

Lab Sample ID: LCS 400-348054/7
Matrix: Water
Analysis Batch: 348054

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	15.8		mg/L		105	90 - 110

QC Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-348054/3
Matrix: Water
Analysis Batch: 348054

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	6.00		mg/L		120	50 - 150

Lab Sample ID: 400-135676-A-7 MS
Matrix: Water
Analysis Batch: 348054

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	15	B	10.0	26.1		mg/L		108	77 - 128

Lab Sample ID: 400-135676-A-7 MSD
Matrix: Water
Analysis Batch: 348054

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	15	B	10.0	26.2		mg/L		110	77 - 128	0	5

Lab Sample ID: MB 400-349553/6
Matrix: Water
Analysis Batch: 349553

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			04/13/17 08:19	1

Lab Sample ID: LCS 400-349553/7
Matrix: Water
Analysis Batch: 349553

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	14.8		mg/L		98	90 - 110

Lab Sample ID: MRL 400-349553/3
Matrix: Water
Analysis Batch: 349553

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	4.79	J	mg/L		96	50 - 150

Lab Sample ID: 400-135676-A-13 MS
Matrix: Water
Analysis Batch: 349553

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	9.0		10.0	20.7		mg/L		116	77 - 128

Lab Sample ID: 400-135676-A-13 MSD
Matrix: Water
Analysis Batch: 349553

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	9.0		10.0	20.7		mg/L		117	77 - 128	0	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Lab Sample ID: MB 400-349600/6
Matrix: Water
Analysis Batch: 349600

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			04/13/17 10:13	1

Lab Sample ID: LCS 400-349600/7
Matrix: Water
Analysis Batch: 349600

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	14.7		mg/L		98	90 - 110

Lab Sample ID: MRL 400-349600/3
Matrix: Water
Analysis Batch: 349600

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	4.89	J	mg/L		98	50 - 150

Lab Sample ID: 400-135678-A-4 MS
Matrix: Water
Analysis Batch: 349600

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	530	F1	400	518	F1	mg/L		-3	77 - 128

Lab Sample ID: 400-135678-A-4 MSD
Matrix: Water
Analysis Batch: 349600

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	530	F1	400	531	F1	mg/L		0.2	77 - 128	3	5

Lab Sample ID: MB 400-349656/6
Matrix: Water
Analysis Batch: 349656

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			04/13/17 14:44	1

Lab Sample ID: LCS 400-349656/7
Matrix: Water
Analysis Batch: 349656

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 400-349656/3
Matrix: Water
Analysis Batch: 349656

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	5.26		mg/L		105	50 - 150

QC Sample Results

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

TestAmerica Job ID: 400-135678-2
 SDG: Gorgas Landfill (7)

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: 400-135678-14 MS
Matrix: Water
Analysis Batch: 349656

Client Sample ID: AX06721 MW-4 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2900	F1	850	2760	F1	mg/L		-16	77 - 128

Lab Sample ID: 400-135678-14 MSD
Matrix: Water
Analysis Batch: 349656

Client Sample ID: AX06721 MW-4 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	2900	F1	850	2900	F1	mg/L		-0.5	77 - 128	5	5

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TestAmerica Pensacola
 3355 McLeamore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information
 Client Contact: Ben Rothschild
 Company: Sarah Copeland
 Address: Alabama Power General Test Laboratory
 744 County Rd 87 GSC #8
 City: Calera
 State, Zip: AL, 35040
 Phone: 205-664-6121 (Tel)
 Email: sgcopela@southemco.com
 Project #: 40007143
 CCR
 Site: Gorgas Landfill (7)

Lab Pk: Whitmire, Cheyenne R
E-Mail: cheyenne.whitmire@testamericainc.com

Carrier Tracking Note(s):

Due Date Requested:
 TAT Requested (days): Routine

PO #:
WO #:
Project #:
CCR:
SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Inorganic, Organic, Metals, etc.)	SM 4500 F.C.	SM 4500 Cl.E	SM 4500 SO4.E	Special Instructions/Note
AX06717	3/21/17	1237	G	Water	X	X	X	MW-12
AX06718	3/21/17	1350	G	Water	X	X	X	MW-11
AX06719	3/21/17	1600	G	Water	X	X	X	MW-10
AX06721	3/22/17	0922	G	Water	Y	X	X	MW-4 Dup (Sample Duplicate)
AX06725	3/22/17	1410	G	Water	X	X	X	FB-1 (Field Blank)
AX06726	3/22/17	1420	G	Water	X	X	X	EB-1 (Equipment Blank)
AX06724	3/22/17	1347	G	Water	X	X	X	MW-1
AX06723	3/22/17	1235	G	Water	X	X	X	MW-2
AX06722	3/22/17	1110	G	Water	X	X	X	MW-3
AX06720	3/22/17	0922	G	Water	X	X	X	MW-4

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - NaOH
 G - Amchlor
 H - Asorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other:

Special Instructions/Note:

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

Deliverable Requested: Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Empty Kit Relinquished by: Sarah Copeland
 Relinquished by: Sarah Copeland
 Relinquished by:
 Relinquished by:

Date: 03/24/2017; 1400
 Date/Time: 3/21/2017 8:34
 Date/Time:
 Date/Time:

Custody Seals Intact: Custody Seal No.:
 Δ Yes Δ No 19.1°C - 12.2



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-135678-2
SDG Number: Gorgas Landfill (7)

Login Number: 135678

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	19.1°C IR-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?	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: 400-135678-2
 SDG: Gorgas Landfill (7)

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	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17



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: 400-135680-2

TestAmerica Sample Delivery Group: Gorgas Landfill (7)

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:

4/28/2017 11:30:38 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-135680-2
SDG: Gorgas Landfill (7)

Job ID: 400-135680-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-135680-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-300958. The following samples were reduced to 750 ml due to limited volume: AX06713 MW-1L (400-135680-7), AX06714 MW-2L (400-135680-8), AX06714 MW-2L (400-135680-8[DU]), AX06715 MW-3L (400-135680-9), AX06716 MW-4L (400-135680-10), AX06727 MW-11 (400-135680-11), AX06728 MW-12 (400-135680-12), AX06729 MW-10 (400-135680-13), AX06731 MW-4 DUP (400-135680-14), AX06735 FB-1 (400-135680-15) and AX06736 EB-1 (400-135680-16).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-301018. The following samples were reduced to 750 ml due to limited volume: AX06713 MW-1L (400-135680-7), AX06714 MW-2L (400-135680-8), AX06714 MW-2L (400-135680-8[DU]), AX06715 MW-3L (400-135680-9), AX06716 MW-4L (400-135680-10), AX06727 MW-11 (400-135680-11), AX06728 MW-12 (400-135680-12), AX06729 MW-10 (400-135680-13), AX06731 MW-4 DUP (400-135680-14), AX06735 FB-1 (400-135680-15) and AX06736 EB-1 (400-135680-16).

Method Summary

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

TestAmerica Job ID: 400-135680-2
SDG: Gorgas Landfill (7)

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: 400-135680-2
SDG: Gorgas Landfill (7)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-135680-7	AX06734 MW-1	Water	03/22/17 13:47	03/27/17 08:34
400-135680-8	AX06733 MW-2	Water	03/22/17 12:35	03/27/17 08:34
400-135680-9	AX06732 MW-3	Water	03/22/17 11:10	03/27/17 08:34
400-135680-10	AX06730 MW-4	Water	03/22/17 09:22	03/27/17 08:34
400-135680-11	AX06727 MW-11	Water	03/21/17 13:50	03/27/17 08:34
400-135680-12	AX06728 MW-12	Water	03/21/17 12:37	03/27/17 08:34
400-135680-13	AX06729 MW-10	Water	03/21/17 16:00	03/27/17 08:34
400-135680-14	AX06731 MW-4 DUP	Water	03/22/17 09:22	03/27/17 08:34
400-135680-15	AX06735 FB-1	Water	03/22/17 14:10	03/27/17 08:34
400-135680-16	AX06736 EB-1	Water	03/22/17 14:20	03/27/17 08:34

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06734 MW-1

Lab Sample ID: 400-135680-7

Date Collected: 03/22/17 13:47

Matrix: Water

Date Received: 03/27/17 08:34

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0928	U	0.105	0.106	1.00	0.170	pCi/L	04/03/17 07:10	04/24/17 19:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.4		40 - 110					04/03/17 07:10	04/24/17 19:57	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	0.354	0.355	1.00	0.592	pCi/L	03/31/17 11:16	04/13/17 11:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.4		40 - 110					03/31/17 11:16	04/13/17 11:26	1
Y Carrier	90.8		40 - 110					03/31/17 11:16	04/13/17 11:26	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	0.344	U	0.370	0.371	5.00	0.592	pCi/L		04/26/17 11:17	1

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06733 MW-2

Lab Sample ID: 400-135680-8

Date Collected: 03/22/17 12:35

Matrix: Water

Date Received: 03/27/17 08:34

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	U	0.105	0.105	1.00	0.155	pCi/L	04/03/17 07:10	04/24/17 19:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		40 - 110					04/03/17 07:10	04/24/17 19:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.159	U	0.454	0.455	1.00	0.779	pCi/L	03/31/17 11:16	04/13/17 11:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		40 - 110					03/31/17 11:16	04/13/17 11:26	1
Y Carrier	82.6		40 - 110					03/31/17 11:16	04/13/17 11:26	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	0.279	U	0.466	0.467	5.00	0.779	pCi/L		04/26/17 11:17	1

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06732 MW-3

Lab Sample ID: 400-135680-9

Date Collected: 03/22/17 11:10

Matrix: Water

Date Received: 03/27/17 08:34

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		0.105	0.106	1.00	0.138	pCi/L	04/03/17 07:10	04/24/17 19:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					04/03/17 07:10	04/24/17 19:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.772		0.349	0.356	1.00	0.499	pCi/L	03/31/17 11:16	04/13/17 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					03/31/17 11:16	04/13/17 11:30	1
Y Carrier	90.8		40 - 110					03/31/17 11:16	04/13/17 11:30	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	0.927		0.364	0.371	5.00	0.499	pCi/L		04/26/17 11:17	1

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06730 MW-4

Lab Sample ID: 400-135680-10

Date Collected: 03/22/17 09:22

Matrix: Water

Date Received: 03/27/17 08:34

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0151	U	0.0651	0.0652	1.00	0.151	pCi/L	04/03/17 07:10	04/24/17 19:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					04/03/17 07:10	04/24/17 19:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.147	U	0.276	0.276	1.00	0.471	pCi/L	03/31/17 11:16	04/13/17 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					03/31/17 11:16	04/13/17 11:30	1
Y Carrier	92.0		40 - 110					03/31/17 11:16	04/13/17 11:30	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	0.132	U	0.283	0.284	5.00	0.471	pCi/L		04/26/17 11:17	1

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06727 MW-11

Lab Sample ID: 400-135680-11

Date Collected: 03/21/17 13:50

Matrix: Water

Date Received: 03/27/17 08:34

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.231		0.125	0.126	1.00	0.150	pCi/L	04/03/17 07:10	04/24/17 19:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					04/03/17 07:10	04/24/17 19:59	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	0.327	0.327	1.00	0.557	pCi/L	03/31/17 11:16	04/13/17 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					03/31/17 11:16	04/13/17 11:30	1
Y Carrier	85.2		40 - 110					03/31/17 11:16	04/13/17 11:30	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	0.403	U	0.350	0.351	5.00	0.557	pCi/L		04/26/17 11:17	1

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06728 MW-12

Lab Sample ID: 400-135680-12

Date Collected: 03/21/17 12:37

Matrix: Water

Date Received: 03/27/17 08:34

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0449	U	0.0961	0.0962	1.00	0.174	pCi/L	04/03/17 07:10	04/24/17 19:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					04/03/17 07:10	04/24/17 19:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0561	U	0.381	0.381	1.00	0.666	pCi/L	03/31/17 11:16	04/13/17 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					03/31/17 11:16	04/13/17 11:30	1
Y Carrier	89.0		40 - 110					03/31/17 11:16	04/13/17 11:30	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	0.101	U	0.393	0.393	5.00	0.666	pCi/L		04/26/17 11:17	1

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06729 MW-10

Lab Sample ID: 400-135680-13

Date Collected: 03/21/17 16:00

Matrix: Water

Date Received: 03/27/17 08:34

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0859	U	0.0916	0.0919	1.00	0.144	pCi/L	04/03/17 07:10	04/24/17 19:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					04/03/17 07:10	04/24/17 19:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0146	U	0.278	0.278	1.00	0.499	pCi/L	03/31/17 11:16	04/13/17 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					03/31/17 11:16	04/13/17 11:30	1
Y Carrier	89.0		40 - 110					03/31/17 11:16	04/13/17 11:30	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	0.101	U	0.293	0.293	5.00	0.499	pCi/L		04/26/17 11:17	1

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06731 MW-4 DUP

Lab Sample ID: 400-135680-14

Date Collected: 03/22/17 09:22

Matrix: Water

Date Received: 03/27/17 08:34

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0740	U	0.0921	0.0924	1.00	0.152	pCi/L	04/03/17 07:10	04/24/17 19:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					04/03/17 07:10	04/24/17 19:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0178	U	0.267	0.267	1.00	0.487	pCi/L	03/31/17 11:16	04/13/17 11:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					03/31/17 11:16	04/13/17 11:31	1
Y Carrier	90.1		40 - 110					03/31/17 11:16	04/13/17 11:31	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	0.0562	U	0.282	0.282	5.00	0.487	pCi/L		04/26/17 11:17	1

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06735 FB-1

Lab Sample ID: 400-135680-15

Date Collected: 03/22/17 14:10

Matrix: Water

Date Received: 03/27/17 08:34

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00904	U	0.0747	0.0747	1.00	0.152	pCi/L	04/03/17 07:10	04/24/17 20:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					04/03/17 07:10	04/24/17 20:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.103	U	0.303	0.303	1.00	0.527	pCi/L	03/31/17 11:16	04/13/17 11:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					03/31/17 11:16	04/13/17 11:31	1
Y Carrier	84.1		40 - 110					03/31/17 11:16	04/13/17 11:31	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	0.112	U	0.312	0.312	5.00	0.527	pCi/L		04/26/17 11:17	1

Client Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Client Sample ID: AX06736 EB-1

Lab Sample ID: 400-135680-16

Date Collected: 03/22/17 14:20

Matrix: Water

Date Received: 03/27/17 08:34

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0110	U	0.0887	0.0887	1.00	0.178	pCi/L	04/03/17 07:10	04/24/17 20:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110					04/03/17 07:10	04/24/17 20:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0728	U	0.348	0.349	1.00	0.613	pCi/L	03/31/17 11:16	04/13/17 11:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110					03/31/17 11:16	04/13/17 11:31	1
Y Carrier	81.1		40 - 110					03/31/17 11:16	04/13/17 11:31	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	0.0838	U	0.360	0.360	5.00	0.613	pCi/L		04/26/17 11:17	1

Definitions/Glossary

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

TestAmerica Job ID: 400-135680-2
SDG: Gorgas Landfill (7)

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: 400-135680-2
SDG: Gorgas Landfill (7)

Client Sample ID: AX06734 MW-1

Lab Sample ID: 400-135680-7

Date Collected: 03/22/17 13:47

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 19:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303348	04/13/17 11:26	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	RTM	TAL SL

Client Sample ID: AX06733 MW-2

Lab Sample ID: 400-135680-8

Date Collected: 03/22/17 12:35

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 19:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303348	04/13/17 11:26	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	RTM	TAL SL

Client Sample ID: AX06732 MW-3

Lab Sample ID: 400-135680-9

Date Collected: 03/22/17 11:10

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 19:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303352	04/13/17 11:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	RTM	TAL SL

Client Sample ID: AX06730 MW-4

Lab Sample ID: 400-135680-10

Date Collected: 03/22/17 09:22

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 19:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303352	04/13/17 11:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-135680-2
SDG: Gorgas Landfill (7)

Client Sample ID: AX06727 MW-11

Lab Sample ID: 400-135680-11

Date Collected: 03/21/17 13:50

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 19:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303352	04/13/17 11:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	RTM	TAL SL

Client Sample ID: AX06728 MW-12

Lab Sample ID: 400-135680-12

Date Collected: 03/21/17 12:37

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 19:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303352	04/13/17 11:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	RTM	TAL SL

Client Sample ID: AX06729 MW-10

Lab Sample ID: 400-135680-13

Date Collected: 03/21/17 16:00

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 19:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303352	04/13/17 11:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	RTM	TAL SL

Client Sample ID: AX06731 MW-4 DUP

Lab Sample ID: 400-135680-14

Date Collected: 03/22/17 09:22

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 19:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303352	04/13/17 11:31	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-135680-2
SDG: Gorgas Landfill (7)

Client Sample ID: AX06735 FB-1

Lab Sample ID: 400-135680-15

Date Collected: 03/22/17 14:10

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 20:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303352	04/13/17 11:31	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	RTM	TAL SL

Client Sample ID: AX06736 EB-1

Lab Sample ID: 400-135680-16

Date Collected: 03/22/17 14:20

Matrix: Water

Date Received: 03/27/17 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			301018	04/03/17 07:10	MBC	TAL SL
Total/NA	Analysis	9315		1	305125	04/24/17 20:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			300958	03/31/17 11:16	LDE	TAL SL
Total/NA	Analysis	9320		1	303352	04/13/17 11:31	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	305685	04/26/17 11:17	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: 400-135680-2
SDG: Gorgas Landfill (7)

Rad

Prep Batch: 300958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135680-7	AX06734 MW-1	Total/NA	Water	PrecSep_0	
400-135680-8	AX06733 MW-2	Total/NA	Water	PrecSep_0	
400-135680-9	AX06732 MW-3	Total/NA	Water	PrecSep_0	
400-135680-10	AX06730 MW-4	Total/NA	Water	PrecSep_0	
400-135680-11	AX06727 MW-11	Total/NA	Water	PrecSep_0	
400-135680-12	AX06728 MW-12	Total/NA	Water	PrecSep_0	
400-135680-13	AX06729 MW-10	Total/NA	Water	PrecSep_0	
400-135680-14	AX06731 MW-4 DUP	Total/NA	Water	PrecSep_0	
400-135680-15	AX06735 FB-1	Total/NA	Water	PrecSep_0	
400-135680-16	AX06736 EB-1	Total/NA	Water	PrecSep_0	
MB 160-300958/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-300958/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-135680-8 DU	AX06733 MW-2	Total/NA	Water	PrecSep_0	
400-135680-B-2-B DU	Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 301018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135680-7	AX06734 MW-1	Total/NA	Water	PrecSep-21	
400-135680-8	AX06733 MW-2	Total/NA	Water	PrecSep-21	
400-135680-9	AX06732 MW-3	Total/NA	Water	PrecSep-21	
400-135680-10	AX06730 MW-4	Total/NA	Water	PrecSep-21	
400-135680-11	AX06727 MW-11	Total/NA	Water	PrecSep-21	
400-135680-12	AX06728 MW-12	Total/NA	Water	PrecSep-21	
400-135680-13	AX06729 MW-10	Total/NA	Water	PrecSep-21	
400-135680-14	AX06731 MW-4 DUP	Total/NA	Water	PrecSep-21	
400-135680-15	AX06735 FB-1	Total/NA	Water	PrecSep-21	
400-135680-16	AX06736 EB-1	Total/NA	Water	PrecSep-21	
MB 160-301018/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-301018/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-135680-8 DU	AX06733 MW-2	Total/NA	Water	PrecSep-21	
400-135680-B-2-C DU	Duplicate	Total/NA	Water	PrecSep-21	

QC Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-301018/1-A
Matrix: Water
Analysis Batch: 305125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 301018

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04768	U	0.106	0.106	1.00	0.190	pCi/L	04/03/17 07:09	04/24/17 19:55	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					04/03/17 07:09	04/24/17 19:55	1

Lab Sample ID: LCS 160-301018/2-A
Matrix: Water
Analysis Batch: 305125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 301018

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.2	17.37		1.79	1.00	0.159	pCi/L	115	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	91.4		40 - 110						

Lab Sample ID: 400-135680-8 DU
Matrix: Water
Analysis Batch: 305125

Client Sample ID: AX06733 MW-2
Prep Type: Total/NA
Prep Batch: 301018

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.120	U	0.07774	U	0.0987	1.00	0.163	pCi/L	0.21	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	81.4		40 - 110							

Lab Sample ID: 400-135680-B-2-C DU
Matrix: Water
Analysis Batch: 305125

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 301018

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0421	U	0.03061	U	0.0850	1.00	0.160	pCi/L	0.06	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	93.5		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-300958/1-A
Matrix: Water
Analysis Batch: 303348

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 300958

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2886	U	0.422	0.423	1.00	0.705	pCi/L	03/31/17 11:16	04/13/17 11:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					03/31/17 11:16	04/13/17 11:24	1
Y Carrier	84.9		40 - 110					03/31/17 11:16	04/13/17 11:24	1

Lab Sample ID: LCS 160-300958/2-A
Matrix: Water
Analysis Batch: 303348

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 300958

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	18.1	19.73		2.14	1.00	0.588	pCi/L	109	56 - 140
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	91.4		40 - 110						
Y Carrier	89.0		40 - 110						

Lab Sample ID: 400-135680-8 DU
Matrix: Water
Analysis Batch: 303352

Client Sample ID: AX06733 MW-2
Prep Type: Total/NA
Prep Batch: 300958

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.159	U	0.0000	U	0.351	1.00	0.628	pCi/L	0.20	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	81.4		40 - 110							
Y Carrier	86.7		40 - 110							

Lab Sample ID: 400-135680-B-2-B DU
Matrix: Water
Analysis Batch: 303348

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 300958

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	-0.0579	U	0.6028		0.360	1.00	0.543	pCi/L	0.87	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	93.5		40 - 110							
Y Carrier	90.5		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-135680-2
 SDG: Gorgas Landfill (7)

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

Lab Sample ID: 400-135680-8 DU
Matrix: Water
Analysis Batch: 305685

Client Sample ID: AX06733 MW-2
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	0.279	U	0.07774	U	0.365	5.00	0.628	pCi/L	0.24	

Lab Sample ID: 400-135680-A-2 DU
Matrix: Water
Analysis Batch: 305685

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	-0.0158	U	0.6334		0.370	5.00	0.543	pCi/L	0.83	

Chain of Custody Record

Client Information 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 (7)		Lab P#: Whitnire, Cheyenne R E-Mail: cheyenne.whitnire@testamericainc.com		Carrier Tracking No(s): COC No: 400-56525-24537.1 Page: Page 1 fo 1 Job #: 400-135680-2					
Due Date Requested: TAT Requested (days): Routine PO #: WO #: Project #: 40007143 SOW#:		Analysis Requested Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - As/NaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecalhydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - ph 4.5 L - EDA Z - other (specify) Other:							
Sample Identification Sample ID AX06727 AX06728 AX06729 AX06731 AX06735 AX06736 AX06734 AX06733 AX06732 AX06730		Sample Date 3/21/17 3/21/17 3/21/17 3/22/17 3/22/17 3/22/17 3/22/17 3/22/17 3/22/17		Sample Time 1350 1237 1600 0922 1410 1420 1347 1235 1110 0922		Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air) Water Water Water Water Water Water Water Water Water Water Water		Special Instructions/Note: MW-11 MW-12 MW-10 MW-4 Dup (Sample Duplicate) FB-1 (Field Blank) EB-1 (Equipment Blank) MW-1 MW-2 MW-3 MW-4	
Possible Hazard Identification <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)		Date: Date/Time: 03/24/2017, 1450 Date/Time: Date/Time:		Date/Time: Date/Time: Date/Time:		Company APC Company Company		Received by: Received by: Received by:	
Empty Kit Relinquished by: Relinquished by: Sarah Copeland Relinquished by: Relinquished by:		Date: Date/Time: 03/24/2017, 1450 Date/Time: Date/Time:		Date/Time: Date/Time: Date/Time:		Company APC Company Company		Received by: Received by: Received by:	
Custody Seals Intact: Δ Yes Δ No		Date: Date/Time: 03/24/2017, 1450 Date/Time: Date/Time:		Date/Time: Date/Time: Date/Time:		Company APC Company Company		Received by: Received by: Received by:	



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-135680-2
SDG Number: Gorgas Landfill (7)

Login Number: 135680

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	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 <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: 400-135680-2
 SDG: Gorgas Landfill (7)

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	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

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	06-30-17 *
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17 *
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17 *
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17 *
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: 400-135680-2
SDG: Gorgas Landfill (7)

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	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-18
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17 *
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

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

TestAmerica Pensacola



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

- Field Complete
- Lab Complete

Lab ETA 03/23/2017 08:30

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 MW2. Ra does not require temperature preservation. SGC		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-11R	03/21/2017	13:50	1	Groundwater		AX06727
MW-12R	03/21/2017	12:37	1	Groundwater		AX06728
MW-10R	03/21/2017	16:00	1	Groundwater		AX06729
MW-4R	03/22/2017	09:22	1	Groundwater		AX06730
MW-4R DUP	03/22/2017	09:22	1	Sample Duplicate		AX06731
MW-3R	03/22/2017	11:10	1	Groundwater		AX06732
MW-2R	03/22/2017	12:35	3	Groundwater		AX06733
MW-1R	03/22/2017	13:47	1	Groundwater		AX06734
FB-1R	03/22/2017	14:10	1	Field Blank		AX06735
EB-1R	03/22/2017	14:20	1	Equipment Blank		AX06736

Relinquished By	Received By	Date/Time
Benjamin Rothschadl <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=X2BTR0TH@southernco.com, c=US Date: 2017.03.23 08:02:34 -05'00'</small>	Sarah Copeland <small>Digitally signed by Sarah Copeland DN: cn=Sarah Copeland, o, ou, email=sgcopela@southernco.com, c=US Date: 2017.03.23 09:02:41 -05'00'</small>	03/23/2017 09:02

SmarTroll ID	4696-23441-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20010-2-2	Cooler Temp
		Thermometer ID
		pH Strip ID
		NA
		NA
		5521-28268-20-12

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

 Alabama Power



Sample Group : WMWGORLF_1098

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1098

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 anions were outsourced to Test America, Pensacola for analysis. Listed below is the job narrative provided by Test America for these samples.

Job Narrative
400-138811-2
General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) RPD for batch 357755 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 356536 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. Samples required a dilution, which may have diluted the spike

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX12600 MW-1 (400-138811-7), AX12601 MW-11 (400-138811-11), (400-138811-A-4), (400-138811-A-4 MS) and (400-138811-A-4 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 356862 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.

Comments

Sample AX12608 MW-12 (400-138811-15) was rerun outside of holding without a dilution to confirm results. both sets of data were reported.



Metals ICP

Gorgas Landfill

WMWGORLF_1098

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>
AX12600	20170609EK	WMWGORLF_1098
AX12601	20170609FK	WMWGORLF_1098
AX12602	20170609EK	WMWGORLF_1098
AX12603	20170609FK	WMWGORLF_1098
AX12604	20170609EK	WMWGORLF_1098
AX12605	20170609EK	WMWGORLF_1098
AX12606	20170609FK	WMWGORLF_1098
AX12607	20170609FK	WMWGORLF_1098
AX12608	20170609FK	WMWGORLF_1098
AX12609	20170609FK	WMWGORLF_1098

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

General Quality Control Procedures:

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



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

Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met, with the following exception:

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AX12605

The concentration of the matrix spike/matrix spike duplicate 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 dilution to compensate for any 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>
AX12600	Calcium	x10
AX12602	Calcium	x10
AX12604	Calcium	x10
AX12605	Calcium	x10
AX12605MS	Calcium	x10
AX12605MSD	Calcium	x10
AX12601	Calcium	x10
AX12603	Calcium	x10
AX12607	Calcium	x10
AX12608	Calcium	x10

8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1098

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>
AX12600	595760	WMWGORLF_1098
AX12601	595713	WMWGORLF_1098
AX12602	595760	WMWGORLF_1098
AX12603	595713	WMWGORLF_1098
AX12604	595760	WMWGORLF_1098
AX12605	595760	WMWGORLF_1098
AX12606	595713	WMWGORLF_1098
AX12607	595713	WMWGORLF_1098
AX12608	595713	WMWGORLF_1098
AX12609	595713	WMWGORLF_1098

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_1098

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>
AX12600	596170	WMWGORLF_1098
AX12601	596217	WMWGORLF_1098
AX12602	596170	WMWGORLF_1098
AX12603	596217	WMWGORLF_1098
AX12604	596170	WMWGORLF_1098
AX12605	596170	WMWGORLF_1098
AX12606	596217	WMWGORLF_1098
AX12607	596217	WMWGORLF_1098
AX12608	596217	WMWGORLF_1098
AX12609	596217	WMWGORLF_1098

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 except for AX12609. AX12609 had a drop in response signal during read time, but the response at the highest point was still less than the RL. The MS and MSD also confirm that no Hg was in the sample.



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_1098

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>
AX12600	595832	WMWGORLF_1098
AX12601	595832	WMWGORLF_1098
AX12602	596256	WMWGORLF_1098
AX12603	596256	WMWGORLF_1098
AX12604	596256	WMWGORLF_1098
AX12605	596256	WMWGORLF_1098
AX12606	596256	WMWGORLF_1098
AX12607	596256	WMWGORLF_1098
AX12608	596256	WMWGORLF_1098
AX12609	596256	WMWGORLF_1098

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 0.5 mg 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 2.5 mg and 200 mg residue with the exception of samples AX12606 and AX12609 which did not meet the 2.5mg requirement.

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: 30-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX12600

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	J 0.00982	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7	10		1.00	5	140	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	0.00214	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	0.0465	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7	2		0.01	0.05	J 0.0229	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	J 0.00316	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/6/2017	SM 2540C	1			125	2240	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E	1		0.60	2.00	2.6	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C	1		0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E	60		84.0	300	1400	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: 30-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX12600

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX12605	Lead, Total	mg/L	0.0000294	0.0022	0.10	0.108	0.104	0.085 to 0.115	108	70 to 130	3.07	20	
AX12605	Chromium, Total	mg/L	0.0000341	0.0044	0.10	0.0998	0.104	0.085 to 0.115	99.8	70 to 130	4.29	20	
AX12605	Arsenic, Total	mg/L	0.0000175	0.0022	0.10	0.104	0.106	0.085 to 0.115	104	70 to 130	3.32	20	
AX12605	Barium, Total	mg/L	0.0000257	0.0044	0.10	0.102	0.103	0.085 to 0.115	91.3	70 to 130	1.27	20	
AX12605	Selenium, Total	mg/L	0.000108	0.0044	0.10	0.101	0.103	0.085 to 0.115	101	70 to 130	1.41	20	
AX12605	Calcium, Total	mg/L	-0.0172	0.22	5.	296	299	4.25 to 5.75	240	70 to 130	1.01	20	
AX12605	Molybdenum, Total	mg/L	0.0000139	0.0044	0.10	0.0900	0.0911	0.085 to 0.115	90.0	70 to 130	1.22	20	
AX12605	Boron, Total	mg/L	-0.00111	0.044	1.00	0.994	1.01	0.85 to 1.15	95.5	70 to 130	1.88	20	
AX12605	Mercury, Total by CVAA	mg/L	0.0000111	0.0005	0.004	0.00375	0.00378	0.0034 to 0.0046	93.7	70 to 130	0.996	20	
AX12605	Thallium, Total	mg/L	0.0000195	0.00044	0.10	0.108	0.105	0.085 to 0.115	108	70 to 130	3.04	20	
AX12605	Beryllium, Total	mg/L	0.0000310	0.00132	0.10	0.0909	0.0896	0.085 to 0.115	90.9	70 to 130	1.37	20	
AX12605	Cobalt, Total	mg/L	0.0000129	0.0044	0.10	0.0901	0.0923	0.085 to 0.115	90.1	70 to 130	2.34	20	
AX12605	Lithium, Total	mg/L	-0.0000916	0.022	0.20	0.294	0.305	0.17 to 0.23	122	70 to 130	3.72	20	
AX12605	Antimony, Total	mg/L	0.0000311	0.00132	0.10	0.0892	0.0903	0.085 to 0.115	89.2	70 to 130	1.19	20	
AX12605	Cadmium, Total	mg/L	0.0000162	0.00044	0.10	0.0936	0.0953	0.085 to 0.115	93.6	70 to 130	1.88	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: 30-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX12600

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12601	Solids, Dissolved	mg/L	9.00	25			2850	59.0	40 to 60		0.697 5

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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: 30-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX12601

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	J 0.00214	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	0.0120	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7	2		0.02	0.1	J 0.0926	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7	10		1.00	5	370	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7	2		0.01	0.05	0.230	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/6/2017	SM 2540C	1			250	2890	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E	1		0.60	2.00	3.2	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C	1		0.032	0.10	J 0.096	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E	60		84.0	300	1700	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: 30-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX12601

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX12609	Chromium, Total	mg/L	0.0000632	0.0044	0.10	0.0996	0.102	0.102	0.085 to 0.115	99.6	70 to 130	2.62	20	
AX12609	Selenium, Total	mg/L	0.0000302	0.0044	0.10	0.100	0.104	0.106	0.085 to 0.115	100	70 to 130	3.88	20	
AX12609	Cobalt, Total	mg/L	0.0000120	0.0044	0.10	0.0909	0.0937	0.0980	0.085 to 0.115	90.9	70 to 130	3.08	20	
AX12609	Mercury, Total by CVAA	mg/L	0.0000140	0.0005	0.004	0.00371	0.00374	0.00374	0.0034 to 0.0046	92.7	70 to 130	0.932	20	
AX12609	Antimony, Total	mg/L	0.0000320	0.00132	0.10	0.0904	0.0950	0.0938	0.085 to 0.115	90.4	70 to 130	4.92	20	
AX12609	Lead, Total	mg/L	0.0000210	0.0022	0.10	0.117	0.106	0.104	0.085 to 0.115	117	70 to 130	9.47	20	
AX12609	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.0922	0.0946	0.0975	0.085 to 0.115	92.2	70 to 130	2.51	20	
AX12609	Boron, Total	mg/L	-0.000875	0.044	1.00	0.963	0.897	0.908	0.85 to 1.15	96.3	70 to 130	7.08	20	
AX12609	Cadmium, Total	mg/L	0.000000893	0.00044	0.10	0.0945	0.0973	0.100	0.085 to 0.115	94.5	70 to 130	2.92	20	
AX12609	Calcium, Total	mg/L	-0.00939	0.22	5.00	4.61	4.57	4.79	4.25 to 5.75	92.2	70 to 130	0.795	20	
AX12609	Beryllium, Total	mg/L	0.0000318	0.00132	0.10	0.101	0.0918	0.0976	0.085 to 0.115	101	70 to 130	9.97	20	
AX12609	Lithium, Total	mg/L	-0.0000974	0.022	0.20	0.181	0.174	0.189	0.17 to 0.23	90.5	70 to 130	3.62	20	
AX12609	Molybdenum, Total	mg/L	0.0000181	0.0044	0.10	0.105	0.0891	0.0872	0.085 to 0.115	105	70 to 130	16.7	20	
AX12609	Arsenic, Total	mg/L	0.0000174	0.0022	0.10	0.102	0.104	0.106	0.085 to 0.115	102	70 to 130	2.38	20	
AX12609	Thallium, Total	mg/L	0.0000173	0.00044	0.10	0.116	0.106	0.103	0.085 to 0.115	116	70 to 130	9.47	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: 30-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX12601

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12601	Solids, Dissolved	mg/L	9.00	25			2850	59.0	40 to 60	0.697	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, 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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX12602

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	0.0126	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7		2	0.02	0.1	J 0.0234	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7		10	1.00	5	151	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8		5	0.00020	0.001	J 0.000212	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	0.0441	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7		2	0.01	0.05	J 0.0496	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/8/2017	SM 2540C		1		100	1730	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E		1	0.60	2.00	J 4.4	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C		1	0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E		40	56.0	200	1100	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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX12602

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit	
			MB	Limit					Limit	Rec	Limit	Prec			
AX12605	Lead, Total	mg/L	0.0000294	0.0022	0.10	0.108	0.105	0.104	0.085 to 0.115		108	70 to 130		3.07	20
AX12605	Chromium, Total	mg/L	0.0000341	0.0044	0.10	0.0998	0.104	0.102	0.085 to 0.115		99.8	70 to 130		4.29	20
AX12605	Arsenic, Total	mg/L	0.0000175	0.0022	0.10	0.104	0.108	0.106	0.085 to 0.115		104	70 to 130		3.32	20
AX12605	Antimony, Total	mg/L	0.0000311	0.00132	0.10	0.0892	0.0903	0.0940	0.085 to 0.115		89.2	70 to 130		1.19	20
AX12605	Cadmium, Total	mg/L	0.0000162	0.00044	0.10	0.0936	0.0953	0.0990	0.085 to 0.115		93.6	70 to 130		1.88	20
AX12605	Beryllium, Total	mg/L	0.0000310	0.00132	0.10	0.0909	0.0896	0.0969	0.085 to 0.115		90.9	70 to 130		1.37	20
AX12605	Cobalt, Total	mg/L	0.0000129	0.0044	0.10	0.0901	0.0923	0.0957	0.085 to 0.115		90.1	70 to 130		2.34	20
AX12605	Lithium, Total	mg/L	-0.0000916	0.022	0.20	0.294	0.305	0.190	0.17 to 0.23		122	70 to 130		3.72	20
AX12605	Barium, Total	mg/L	0.0000257	0.0044	0.10	0.102	0.103	0.0959	0.085 to 0.115		91.3	70 to 130		1.27	20
AX12605	Selenium, Total	mg/L	0.000108	0.0044	0.10	0.101	0.103	0.104	0.085 to 0.115		101	70 to 130		1.41	20
AX12605	Calcium, Total	mg/L	-0.0172	0.22	5.	296	299	4.63	4.25 to 5.75		240	70 to 130		1.01	20
AX12605	Molybdenum, Total	mg/L	0.0000139	0.0044	0.10	0.0900	0.0911	0.0888	0.085 to 0.115		90.0	70 to 130		1.22	20
AX12605	Boron, Total	mg/L	-0.00111	0.044	1.00	0.994	1.01	0.907	0.85 to 1.15		95.5	70 to 130		1.88	20
AX12605	Mercury, Total by CVAA	mg/L	0.0000111	0.0005	0.004	0.00375	0.00378	0.00374	0.0034 to 0.0046		93.7	70 to 130		0.996	20
AX12605	Thallium, Total	mg/L	0.0000195	0.00044	0.10	0.108	0.105	0.103	0.085 to 0.115		108	70 to 130		3.04	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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX12602

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12607	Solids, Dissolved	mg/L	-4.00	25			1270	57.0	40 to 60	2.42	5

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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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-2 Dup

Laboratory ID Number: AX12603

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	0.0133	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7	2		0.02	0.1	J 0.0237	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7	10		1.00	5	149	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	0.0444	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7	2		0.01	0.05	J 0.0494	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/8/2017	SM 2540C	1			100	1690	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E	1		0.60	2.00	4.7	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C	1		0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E	40		56.0	200	1100	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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-2 Dup

Laboratory ID Number: AX12603

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX12609	Mercury, Total by CVAA	mg/L	0.0000140	0.0005	0.004	0.00371	0.00374	0.00374	0.0034 to 0.0046		92.7	70 to 130	0.932	20
AX12609	Cobalt, Total	mg/L	0.0000120	0.0044	0.10	0.0909	0.0937	0.0980	0.085 to 0.115		90.9	70 to 130	3.08	20
AX12609	Selenium, Total	mg/L	0.0000302	0.0044	0.10	0.100	0.104	0.106	0.085 to 0.115		100	70 to 130	3.88	20
AX12609	Chromium, Total	mg/L	0.0000632	0.0044	0.10	0.0996	0.102	0.102	0.085 to 0.115		99.6	70 to 130	2.62	20
AX12609	Arsenic, Total	mg/L	0.0000174	0.0022	0.10	0.102	0.104	0.106	0.085 to 0.115		102	70 to 130	2.38	20
AX12609	Thallium, Total	mg/L	0.0000173	0.00044	0.10	0.116	0.106	0.103	0.085 to 0.115		116	70 to 130	9.47	20
AX12609	Antimony, Total	mg/L	0.0000320	0.00132	0.10	0.0904	0.0950	0.0938	0.085 to 0.115		90.4	70 to 130	4.92	20
AX12609	Lead, Total	mg/L	0.0000210	0.0022	0.10	0.117	0.106	0.104	0.085 to 0.115		117	70 to 130	9.47	20
AX12609	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.0922	0.0946	0.0975	0.085 to 0.115		92.2	70 to 130	2.51	20
AX12609	Boron, Total	mg/L	-0.000875	0.044	1.00	0.963	0.897	0.908	0.85 to 1.15		96.3	70 to 130	7.08	20
AX12609	Cadmium, Total	mg/L	0.000000893	0.00044	0.10	0.0945	0.0973	0.100	0.085 to 0.115		94.5	70 to 130	2.92	20
AX12609	Calcium, Total	mg/L	-0.00939	0.22	5.00	4.61	4.57	4.79	4.25 to 5.75		92.2	70 to 130	0.795	20
AX12609	Beryllium, Total	mg/L	0.0000318	0.00132	0.10	0.101	0.0918	0.0976	0.085 to 0.115		101	70 to 130	9.97	20
AX12609	Lithium, Total	mg/L	-0.0000974	0.022	0.20	0.181	0.174	0.189	0.17 to 0.23		90.5	70 to 130	3.62	20
AX12609	Molybdenum, Total	mg/L	0.0000181	0.0044	0.10	0.105	0.0891	0.0872	0.085 to 0.115		105	70 to 130	16.7	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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-2 Dup

Laboratory ID Number: AX12603

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12533	Solids, Dissolved	mg/L	-4.00	25			286	57.0	40 to 60	0.175	5

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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
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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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX12604

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	J 0.00866	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	0.00547	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7	2		0.02	0.1	J 0.0454	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7	10		1.00	5	306	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	0.00296	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	0.225	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7	2		0.01	0.05	0.218	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	J 0.00632	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/8/2017	SM 2540C	1			250	3970	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.5	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C	1		0.032	0.10	0.37	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E	100		140	500	2800	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
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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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX12604

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX12605	Lead, Total	mg/L	0.0000294	0.0022	0.10	0.108	0.105	0.104	0.085 to 0.115	108	70 to 130	3.07	20
AX12605	Arsenic, Total	mg/L	0.0000175	0.0022	0.10	0.104	0.108	0.106	0.085 to 0.115	104	70 to 130	3.32	20
AX12605	Chromium, Total	mg/L	0.0000341	0.0044	0.10	0.0998	0.104	0.102	0.085 to 0.115	99.8	70 to 130	4.29	20
AX12605	Antimony, Total	mg/L	0.0000311	0.00132	0.10	0.0892	0.0903	0.0940	0.085 to 0.115	89.2	70 to 130	1.19	20
AX12605	Cadmium, Total	mg/L	0.0000162	0.00044	0.10	0.0936	0.0953	0.0990	0.085 to 0.115	93.6	70 to 130	1.88	20
AX12605	Boron, Total	mg/L	-0.00111	0.044	1.00	0.994	1.01	0.907	0.85 to 1.15	95.5	70 to 130	1.88	20
AX12605	Mercury, Total by CVAA	mg/L	0.0000111	0.0005	0.004	0.00375	0.00378	0.00374	0.0034 to 0.0046	93.7	70 to 130	0.996	20
AX12605	Thallium, Total	mg/L	0.0000195	0.00044	0.10	0.108	0.105	0.103	0.085 to 0.115	108	70 to 130	3.04	20
AX12605	Calcium, Total	mg/L	-0.0172	0.22	5.	296	299	4.63	4.25 to 5.75	240	70 to 130	1.01	20
AX12605	Molybdenum, Total	mg/L	0.0000139	0.0044	0.10	0.0900	0.0911	0.0888	0.085 to 0.115	90.0	70 to 130	1.22	20
AX12605	Barium, Total	mg/L	0.0000257	0.0044	0.10	0.102	0.103	0.0959	0.085 to 0.115	91.3	70 to 130	1.27	20
AX12605	Selenium, Total	mg/L	0.000108	0.0044	0.10	0.101	0.103	0.104	0.085 to 0.115	101	70 to 130	1.41	20
AX12605	Beryllium, Total	mg/L	0.0000310	0.00132	0.10	0.0909	0.0896	0.0969	0.085 to 0.115	90.9	70 to 130	1.37	20
AX12605	Cobalt, Total	mg/L	0.0000129	0.0044	0.10	0.0901	0.0923	0.0957	0.085 to 0.115	90.1	70 to 130	2.34	20
AX12605	Lithium, Total	mg/L	-0.0000916	0.022	0.20	0.294	0.305	0.190	0.17 to 0.23	122	70 to 130	3.72	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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX12604

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12607	Solids, Dissolved	mg/L	-4.00	25			1270	57.0	40 to 60	2.42	5

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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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX12605

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	0.0104	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7	2		0.02	0.1	J 0.0392	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7	10		1.00	5	284	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7	2		0.01	0.05	0.0501	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/8/2017	SM 2540C	1			250	4210	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E	1		0.60	2.00	2.1	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C	1		0.032	0.10	0.31	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E	100		140	500	2700	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
 Recovery for Calcium is out of spec.
 The spike amount was less than 30% of the sample amount.

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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX12605

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX12605	Lead, Total	mg/L	0.0000294	0.0022	0.10	0.108	0.105	0.104	0.085 to 0.115	108	70 to 130	3.07	20
AX12605	Arsenic, Total	mg/L	0.0000175	0.0022	0.10	0.104	0.108	0.106	0.085 to 0.115	104	70 to 130	3.32	20
AX12605	Chromium, Total	mg/L	0.0000341	0.0044	0.10	0.0998	0.104	0.102	0.085 to 0.115	99.8	70 to 130	4.29	20
AX12605	Antimony, Total	mg/L	0.0000311	0.00132	0.10	0.0892	0.0903	0.0940	0.085 to 0.115	89.2	70 to 130	1.19	20
AX12605	Cadmium, Total	mg/L	0.0000162	0.00044	0.10	0.0936	0.0953	0.0990	0.085 to 0.115	93.6	70 to 130	1.88	20
AX12605	Beryllium, Total	mg/L	0.0000310	0.00132	0.10	0.0909	0.0896	0.0969	0.085 to 0.115	90.9	70 to 130	1.37	20
AX12605	Cobalt, Total	mg/L	0.0000129	0.0044	0.10	0.0901	0.0923	0.0957	0.085 to 0.115	90.1	70 to 130	2.34	20
AX12605	Lithium, Total	mg/L	-0.0000916	0.022	0.20	0.294	0.305	0.190	0.17 to 0.23	122	70 to 130	3.72	20
AX12605	Calcium, Total	mg/L	-0.0172	0.22	5.	296	299	4.63	4.25 to 5.75	240	70 to 130	1.01	20
AX12605	Molybdenum, Total	mg/L	0.0000139	0.0044	0.10	0.0900	0.0911	0.0888	0.085 to 0.115	90.0	70 to 130	1.22	20
AX12605	Boron, Total	mg/L	-0.00111	0.044	1.00	0.994	1.01	0.907	0.85 to 1.15	95.5	70 to 130	1.88	20
AX12605	Mercury, Total by CVAA	mg/L	0.0000111	0.0005	0.004	0.00375	0.00378	0.00374	0.0034 to 0.0046	93.7	70 to 130	0.996	20
AX12605	Thallium, Total	mg/L	0.0000195	0.00044	0.10	0.108	0.105	0.103	0.085 to 0.115	108	70 to 130	3.04	20
AX12605	Barium, Total	mg/L	0.0000257	0.0044	0.10	0.102	0.103	0.0959	0.085 to 0.115	91.3	70 to 130	1.27	20
AX12605	Selenium, Total	mg/L	0.000108	0.0044	0.10	0.101	0.103	0.104	0.085 to 0.115	101	70 to 130	1.41	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
 Recovery for Calcium is out of spec.
 The spike amount was less than 30% of the sample amount.

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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX12605

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12607	Solids, Dissolved	mg/L	-4.00	25			1270	57.0	40 to 60	2.42	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

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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
 Recovery for Calcium is out of spec.
 The spike amount was less than 30% of the sample amount.

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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX12606

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7	2		0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7	2		0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/8/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX12606

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AX12609	Mercury, Total by CVAA	mg/L	0.0000140	0.0005	0.004	0.00371	0.00374	0.00374	0.0034 to 0.0046	92.7	70 to 130	0.932	20
AX12609	Chromium, Total	mg/L	0.0000632	0.0044	0.10	0.0996	0.102	0.102	0.085 to 0.115	99.6	70 to 130	2.62	20
AX12609	Selenium, Total	mg/L	0.0000302	0.0044	0.10	0.100	0.104	0.106	0.085 to 0.115	100	70 to 130	3.88	20
AX12609	Antimony, Total	mg/L	0.0000320	0.00132	0.10	0.0904	0.0950	0.0938	0.085 to 0.115	90.4	70 to 130	4.92	20
AX12609	Lead, Total	mg/L	0.0000210	0.0022	0.10	0.117	0.106	0.104	0.085 to 0.115	117	70 to 130	9.47	20
AX12609	Arsenic, Total	mg/L	0.0000174	0.0022	0.10	0.102	0.104	0.106	0.085 to 0.115	102	70 to 130	2.38	20
AX12609	Thallium, Total	mg/L	0.0000173	0.00044	0.10	0.116	0.106	0.103	0.085 to 0.115	116	70 to 130	9.47	20
AX12609	Cobalt, Total	mg/L	0.0000120	0.0044	0.10	0.0909	0.0937	0.0980	0.085 to 0.115	90.9	70 to 130	3.08	20
AX12609	Beryllium, Total	mg/L	0.0000318	0.00132	0.10	0.101	0.0918	0.0976	0.085 to 0.115	101	70 to 130	9.97	20
AX12609	Lithium, Total	mg/L	-0.0000974	0.022	0.20	0.181	0.174	0.189	0.17 to 0.23	90.5	70 to 130	3.62	20
AX12609	Molybdenum, Total	mg/L	0.0000181	0.0044	0.10	0.105	0.0891	0.0872	0.085 to 0.115	105	70 to 130	16.7	20
AX12609	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.0922	0.0946	0.0975	0.085 to 0.115	92.2	70 to 130	2.51	20
AX12609	Boron, Total	mg/L	-0.000875	0.044	1.00	0.963	0.897	0.908	0.85 to 1.15	96.3	70 to 130	7.08	20
AX12609	Cadmium, Total	mg/L	0.0000000893	0.00044	0.10	0.0945	0.0973	0.100	0.085 to 0.115	94.5	70 to 130	2.92	20
AX12609	Calcium, Total	mg/L	-0.00939	0.22	5.00	4.61	4.57	4.79	4.25 to 5.75	92.2	70 to 130	0.795	20

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

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: 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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX12606

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12607	Solids, Dissolved	mg/L	-4.00	25			1270	57.0	40 to 60	2.42	5

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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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX12607

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	0.0188	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	J 0.00123	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7	2		0.02	0.1	0.149	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7	10		1.00	5	130	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	J 0.00860	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7	2		0.01	0.05	0.194	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/8/2017	SM 2540C	1			50	1210	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E	1		0.60	2.00	3.2	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C	1		0.032	0.10	0.18	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E	40		56.0	200	700	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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX12607

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX12609	Cobalt, Total	mg/L	0.0000120	0.0044	0.10	0.0909	0.0937	0.0980	0.085 to 0.115		90.9	70 to 130	3.08	20
AX12609	Mercury, Total by CVAA	mg/L	0.0000140	0.0005	0.004	0.00371	0.00374	0.00374	0.0034 to 0.0046		92.7	70 to 130	0.932	20
AX12609	Selenium, Total	mg/L	0.0000302	0.0044	0.10	0.100	0.104	0.106	0.085 to 0.115		100	70 to 130	3.88	20
AX12609	Chromium, Total	mg/L	0.0000632	0.0044	0.10	0.0996	0.102	0.102	0.085 to 0.115		99.6	70 to 130	2.62	20
AX12609	Arsenic, Total	mg/L	0.0000174	0.0022	0.10	0.102	0.104	0.106	0.085 to 0.115		102	70 to 130	2.38	20
AX12609	Thallium, Total	mg/L	0.0000173	0.00044	0.10	0.116	0.106	0.103	0.085 to 0.115		116	70 to 130	9.47	20
AX12609	Antimony, Total	mg/L	0.0000320	0.00132	0.10	0.0904	0.0950	0.0938	0.085 to 0.115		90.4	70 to 130	4.92	20
AX12609	Lead, Total	mg/L	0.0000210	0.0022	0.10	0.117	0.106	0.104	0.085 to 0.115		117	70 to 130	9.47	20
AX12609	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.0922	0.0946	0.0975	0.085 to 0.115		92.2	70 to 130	2.51	20
AX12609	Boron, Total	mg/L	-0.000875	0.044	1.00	0.963	0.897	0.908	0.85 to 1.15		96.3	70 to 130	7.08	20
AX12609	Cadmium, Total	mg/L	0.000000893	0.00044	0.10	0.0945	0.0973	0.100	0.085 to 0.115		94.5	70 to 130	2.92	20
AX12609	Calcium, Total	mg/L	-0.00939	0.22	5.00	4.61	4.57	4.79	4.25 to 5.75		92.2	70 to 130	0.795	20
AX12609	Beryllium, Total	mg/L	0.0000318	0.00132	0.10	0.101	0.0918	0.0976	0.085 to 0.115		101	70 to 130	9.97	20
AX12609	Lithium, Total	mg/L	-0.0000974	0.022	0.20	0.181	0.174	0.189	0.17 to 0.23		90.5	70 to 130	3.62	20
AX12609	Molybdenum, Total	mg/L	0.0000181	0.0044	0.10	0.105	0.0891	0.0872	0.085 to 0.115		105	70 to 130	16.7	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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX12607

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12607	Solids, Dissolved	mg/L	-4.00	25			1270	57.0	40 to 60	2.42	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

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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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX12608

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8		5	0.0010	0.005	0.0466	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	0.0107	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7		2	0.02	0.1	0.193	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7		10	1.00	5	313	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	0.0379	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7		2	0.01	0.05	0.0787	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/8/2017	SM 2540C		1		125	3440	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E		1	0.60	2.00	3.9	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C		1	0.032	0.10	0.11	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E		80	110	400	2200	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
 Chloride was incorrectly run at a 10X dilution. The reanalysis is out of hold time.

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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX12608

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX12609	Cobalt, Total	mg/L	0.0000120	0.0044	0.10	0.0909	0.0937	0.0980	0.085 to 0.115		90.9	70 to 130	3.08	20
AX12609	Chromium, Total	mg/L	0.0000632	0.0044	0.10	0.0996	0.102	0.102	0.085 to 0.115		99.6	70 to 130	2.62	20
AX12609	Selenium, Total	mg/L	0.0000302	0.0044	0.10	0.100	0.104	0.106	0.085 to 0.115		100	70 to 130	3.88	20
AX12609	Mercury, Total by CVAA	mg/L	0.0000140	0.0005	0.004	0.00371	0.00374	0.00374	0.0034 to 0.0046		92.7	70 to 130	0.932	20
AX12609	Antimony, Total	mg/L	0.0000320	0.00132	0.10	0.0904	0.0950	0.0938	0.085 to 0.115		90.4	70 to 130	4.92	20
AX12609	Lead, Total	mg/L	0.0000210	0.0022	0.10	0.117	0.106	0.104	0.085 to 0.115		117	70 to 130	9.47	20
AX12609	Arsenic, Total	mg/L	0.0000174	0.0022	0.10	0.102	0.104	0.106	0.085 to 0.115		102	70 to 130	2.38	20
AX12609	Thallium, Total	mg/L	0.0000173	0.00044	0.10	0.116	0.106	0.103	0.085 to 0.115		116	70 to 130	9.47	20
AX12609	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.0922	0.0946	0.0975	0.085 to 0.115		92.2	70 to 130	2.51	20
AX12609	Boron, Total	mg/L	-0.000875	0.044	1.00	0.963	0.897	0.908	0.85 to 1.15		96.3	70 to 130	7.08	20
AX12609	Cadmium, Total	mg/L	0.000000893	0.00044	0.10	0.0945	0.0973	0.100	0.085 to 0.115		94.5	70 to 130	2.92	20
AX12609	Calcium, Total	mg/L	-0.00939	0.22	5.00	4.61	4.57	4.79	4.25 to 5.75		92.2	70 to 130	0.795	20
AX12609	Beryllium, Total	mg/L	0.0000318	0.00132	0.10	0.101	0.0918	0.0976	0.085 to 0.115		101	70 to 130	9.97	20
AX12609	Lithium, Total	mg/L	-0.0000974	0.022	0.20	0.181	0.174	0.189	0.17 to 0.23		90.5	70 to 130	3.62	20
AX12609	Molybdenum, Total	mg/L	0.0000181	0.0044	0.10	0.105	0.0891	0.0872	0.085 to 0.115		105	70 to 130	16.7	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
 Chloride was incorrectly run at a 10X dilution. The reanalysis is out of hold time.

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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX12608

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12607	Solids, Dissolved	mg/L	-4.00	25			1270	57.0	40 to 60	2.42	5

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010
 Chloride was incorrectly run at a 10X dilution. The reanalysis is out of hold time.

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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX12609

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	6/9/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	6/9/2017	EPA 200.7	2		0.1	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	6/6/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	6/9/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	6/9/2017	EPA 200.7	2		0.01	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	6/6/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	6/6/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	6/6/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	6/8/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	6/29/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	6/29/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	6/29/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

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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: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX12609

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX12609	Mercury, Total by CVAA	mg/L	0.0000140	0.0005	0.004	0.00371	0.00374	0.00374	0.0034 to 0.0046	92.7	70 to 130	0.932	20
AX12609	Cobalt, Total	mg/L	0.0000120	0.0044	0.10	0.0909	0.0937	0.0980	0.085 to 0.115	90.9	70 to 130	3.08	20
AX12609	Chromium, Total	mg/L	0.0000632	0.0044	0.10	0.0996	0.102	0.102	0.085 to 0.115	99.6	70 to 130	2.62	20
AX12609	Selenium, Total	mg/L	0.0000302	0.0044	0.10	0.100	0.104	0.106	0.085 to 0.115	100	70 to 130	3.88	20
AX12609	Antimony, Total	mg/L	0.0000320	0.00132	0.10	0.0904	0.0950	0.0938	0.085 to 0.115	90.4	70 to 130	4.92	20
AX12609	Lead, Total	mg/L	0.0000210	0.0022	0.10	0.117	0.106	0.104	0.085 to 0.115	117	70 to 130	9.47	20
AX12609	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.0922	0.0946	0.0975	0.085 to 0.115	92.2	70 to 130	2.51	20
AX12609	Boron, Total	mg/L	-0.000875	0.044	1.00	0.963	0.897	0.908	0.85 to 1.15	96.3	70 to 130	7.08	20
AX12609	Cadmium, Total	mg/L	0.000000893	0.00044	0.10	0.0945	0.0973	0.100	0.085 to 0.115	94.5	70 to 130	2.92	20
AX12609	Calcium, Total	mg/L	-0.00939	0.22	5.00	4.61	4.57	4.79	4.25 to 5.75	92.2	70 to 130	0.795	20
AX12609	Arsenic, Total	mg/L	0.0000174	0.0022	0.10	0.102	0.104	0.106	0.085 to 0.115	102	70 to 130	2.38	20
AX12609	Thallium, Total	mg/L	0.0000173	0.00044	0.10	0.116	0.106	0.103	0.085 to 0.115	116	70 to 130	9.47	20
AX12609	Beryllium, Total	mg/L	0.0000318	0.00132	0.10	0.101	0.0918	0.0976	0.085 to 0.115	101	70 to 130	9.97	20
AX12609	Lithium, Total	mg/L	-0.0000974	0.022	0.20	0.181	0.174	0.189	0.17 to 0.23	90.5	70 to 130	3.62	20
AX12609	Molybdenum, Total	mg/L	0.0000181	0.0044	0.10	0.105	0.0891	0.0872	0.085 to 0.115	105	70 to 130	16.7	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: WMWGORLFEB
 Sample Date: 31-May-17
 Customer ID:
 Delivery Date: 01-Jun-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX12609

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX12607	Solids, Dissolved	mg/L	-4.00	25			1270	57.0	40 to 60	2.42	5

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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:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 06/01/2017 07:15

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Jason Rouss	Location	Gorgas Landfill
Analysis Requested	Bottle 1 (500mL): Metals, Bottle 2 (250mL): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions		
Comments	All anions outsourced to TestAmerica Pensacola.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	05/30/2017	12:11	4	Groundwater		AX12600
MW-11	05/30/2017	15:38	4	Groundwater		AX12601
MW-2	05/31/2017	09:06	4	Groundwater		AX12602
MW-2 Dup	05/31/2017	09:06	4	Sample Duplicate		AX12603
MW-3	05/31/2017	10:50	4	Groundwater		AX12604
MW-4	05/31/2017	12:28	4	Groundwater		AX12605
FB-1	05/31/2017	12:40	4	Field Blank		AX12606
MW-10	05/31/2017	14:08	4	Groundwater		AX12607
MW-12	05/31/2017	16:05	4	Groundwater		AX12608
EB-1	05/31/2017	16:43	4	Equipment Blank		AX12609

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.06.01 15:02:03 -0500</small>	06/01/2017 15:02

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	Cooler Temp
		0.5 degrees C
		Thermometer ID
		6035-30997-2-2
		pH Strip ID
		5521-28262-20-6

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: 400-138811-2

TestAmerica Sample Delivery Group: Gorgas Landfill (8)

Client Project/Site: CCR Plant Gorgas

Revision: 1

For:


Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

7/14/2017 4:04:25 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

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Have a Question?



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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: 400-138811-2
SDG: Gorgas Landfill (8)

Job ID: 400-138811-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-138811-2

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) RPD for batch 357755 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 356536 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. Samples required a dilution, which may have diluted the spike

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX12600 MW-1 (400-138811-7), AX12601 MW-11 (400-138811-11), (400-138811-A-4), (400-138811-A-4 MS) and (400-138811-A-4 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 356862 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.

Comments

Sample AX12608 MW-12 (400-138811-15) was rerun outside of holding without a dilution to confirm results. both sets of data were reported.



Method Summary

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

TestAmerica Job ID: 400-138811-2
SDG: Gorgas Landfill (8)

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



Sample Summary

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

TestAmerica Job ID: 400-138811-2
SDG: Gorgas Landfill (8)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-138811-7	AX12600 MW-1	Water	05/30/17 12:11	06/05/17 15:30
400-138811-8	AX12602 MW-2	Water	05/31/17 09:06	06/05/17 15:30
400-138811-9	AX12604 MW-3	Water	05/31/17 10:50	06/05/17 15:30
400-138811-10	AX12605 MW-4	Water	05/31/17 12:28	06/05/17 15:30
400-138811-11	AX12601 MW-11	Water	05/30/17 15:38	06/05/17 15:30
400-138811-12	AX12603 MW-2 DUP	Water	05/31/17 09:06	06/05/17 15:30
400-138811-13	AX12606 FB-1	Water	05/31/17 12:40	06/05/17 15:30
400-138811-14	AX12607 MW-10	Water	05/31/17 14:08	06/05/17 15:30
400-138811-15	AX12608 MW-12	Water	05/31/17 16:05	06/05/17 15:30
400-138811-16	AX12609 EB-1	Water	05/31/17 16:43	06/05/17 15:30



Client Sample Results

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12600 MW-1

Lab Sample ID: 400-138811-7

Date Collected: 05/30/17 12:11

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.6		2.0	0.60	mg/L			06/10/17 10:36	1
Fluoride	0.13		0.10	0.032	mg/L			06/20/17 17:27	1
Sulfate	1400		300	84	mg/L			06/10/17 14:24	60

Client Sample ID: AX12602 MW-2

Lab Sample ID: 400-138811-8

Date Collected: 05/31/17 09:06

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		2.0	0.60	mg/L			06/13/17 11:39	1
Fluoride	0.13		0.10	0.032	mg/L			06/20/17 17:29	1
Sulfate	1100		200	56	mg/L			06/13/17 18:34	40

Client Sample ID: AX12604 MW-3

Lab Sample ID: 400-138811-9

Date Collected: 05/31/17 10:50

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5	J	2.0	0.60	mg/L			06/13/17 11:39	1
Fluoride	0.37		0.10	0.032	mg/L			06/20/17 17:47	1
Sulfate	2800		500	140	mg/L			06/14/17 11:58	100

Client Sample ID: AX12605 MW-4

Lab Sample ID: 400-138811-10

Date Collected: 05/31/17 12:28

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.1		2.0	0.60	mg/L			06/13/17 11:39	1
Fluoride	0.31		0.10	0.032	mg/L			06/20/17 17:52	1
Sulfate	2700		500	140	mg/L			06/14/17 11:58	100

Client Sample ID: AX12601 MW-11

Lab Sample ID: 400-138811-11

Date Collected: 05/30/17 15:38

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.2		2.0	0.60	mg/L			06/10/17 10:36	1
Fluoride	0.096	J	0.10	0.032	mg/L			06/20/17 17:54	1
Sulfate	1700		300	84	mg/L			06/10/17 14:24	60

Client Sample Results

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12603 MW-2 DUP

Lab Sample ID: 400-138811-12

Date Collected: 05/31/17 09:06

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.7		2.0	0.60	mg/L			06/13/17 11:39	1
Fluoride	0.13		0.10	0.032	mg/L			06/20/17 17:56	1
Sulfate	1100		200	56	mg/L			06/13/17 18:34	40

Client Sample ID: AX12606 FB-1

Lab Sample ID: 400-138811-13

Date Collected: 05/31/17 12:40

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			06/13/17 11:39	1
Fluoride	<0.032		0.10	0.032	mg/L			06/20/17 17:58	1
Sulfate	<1.4		5.0	1.4	mg/L			06/13/17 18:02	1

Client Sample ID: AX12607 MW-10

Lab Sample ID: 400-138811-14

Date Collected: 05/31/17 14:08

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.2		2.0	0.60	mg/L			06/13/17 11:39	1
Fluoride	0.18		0.10	0.032	mg/L			06/22/17 12:23	1
Sulfate	700	F1	200	56	mg/L			06/13/17 18:39	40

Client Sample ID: AX12608 MW-12

Lab Sample ID: 400-138811-15

Date Collected: 05/31/17 16:05

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<6.0		20	6.0	mg/L			06/13/17 11:49	10
Chloride	3.9	H	2.0	0.60	mg/L			07/12/17 15:12	1
Fluoride	0.11		0.10	0.032	mg/L			06/22/17 12:29	1
Sulfate	2200		400	110	mg/L			06/14/17 11:58	80

Client Sample ID: AX12609 EB-1

Lab Sample ID: 400-138811-16

Date Collected: 05/31/17 16:43

Matrix: Water

Date Received: 06/05/17 15:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			06/13/17 11:39	1
Fluoride	<0.032		0.10	0.032	mg/L			06/20/17 17:43	1
Sulfate	<1.4		5.0	1.4	mg/L			06/14/17 11:54	1

Definitions/Glossary

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

TestAmerica Job ID: 400-138811-2
SDG: Gorgas Landfill (8)

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time
F2	MS/MSD RPD exceeds control limits

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: 400-138811-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12600 MW-1
Date Collected: 05/30/17 12:11
Date Received: 06/05/17 15:30

Lab Sample ID: 400-138811-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	356520	06/10/17 10:36	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	357755	06/20/17 17:27	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	356536	06/10/17 14:24	JLB	TAL PEN

Client Sample ID: AX12602 MW-2
Date Collected: 05/31/17 09:06
Date Received: 06/05/17 15:30

Lab Sample ID: 400-138811-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	356798	06/13/17 11:39	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	357755	06/20/17 17:29	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	356862	06/13/17 18:34	JLB	TAL PEN

Client Sample ID: AX12604 MW-3
Date Collected: 05/31/17 10:50
Date Received: 06/05/17 15:30

Lab Sample ID: 400-138811-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	356798	06/13/17 11:39	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	357755	06/20/17 17:47	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	356957	06/14/17 11:58	JLB	TAL PEN

Client Sample ID: AX12605 MW-4
Date Collected: 05/31/17 12:28
Date Received: 06/05/17 15:30

Lab Sample ID: 400-138811-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	356798	06/13/17 11:39	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	357755	06/20/17 17:52	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	356957	06/14/17 11:58	JLB	TAL PEN

Client Sample ID: AX12601 MW-11
Date Collected: 05/30/17 15:38
Date Received: 06/05/17 15:30

Lab Sample ID: 400-138811-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	356520	06/10/17 10:36	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	357755	06/20/17 17:54	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	356536	06/10/17 14:24	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12603 MW-2 DUP

Lab Sample ID: 400-138811-12

Date Collected: 05/31/17 09:06

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CI- E		1	356798	06/13/17 11:39	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	357755	06/20/17 17:56	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	356862	06/13/17 18:34	JLB	TAL PEN

Client Sample ID: AX12606 FB-1

Lab Sample ID: 400-138811-13

Date Collected: 05/31/17 12:40

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CI- E		1	356798	06/13/17 11:39	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	357755	06/20/17 17:58	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	356862	06/13/17 18:02	JLB	TAL PEN

Client Sample ID: AX12607 MW-10

Lab Sample ID: 400-138811-14

Date Collected: 05/31/17 14:08

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CI- E		1	356798	06/13/17 11:39	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	358003	06/22/17 12:23	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	356862	06/13/17 18:39	JLB	TAL PEN

Client Sample ID: AX12608 MW-12

Lab Sample ID: 400-138811-15

Date Collected: 05/31/17 16:05

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CI- E		10	356798	06/13/17 11:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	360220	07/12/17 15:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	358003	06/22/17 12:29	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		80	356957	06/14/17 11:58	JLB	TAL PEN

Client Sample ID: AX12609 EB-1

Lab Sample ID: 400-138811-16

Date Collected: 05/31/17 16:43

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CI- E		1	356798	06/13/17 11:39	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	357755	06/20/17 17:43	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	356957	06/14/17 11:54	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-138811-2
SDG: Gorgas Landfill (8)

Laboratory References:

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

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QC Association Summary

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

General Chemistry

Analysis Batch: 356520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138811-7	AX12600 MW-1	Total/NA	Water	SM 4500 CI- E	
400-138811-11	AX12601 MW-11	Total/NA	Water	SM 4500 CI- E	
MB 400-356520/6	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-356520/7	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-356520/13	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-138811-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 CI- E	
400-138811-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 356536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138811-7	AX12600 MW-1	Total/NA	Water	SM 4500 SO4 E	
400-138811-11	AX12601 MW-11	Total/NA	Water	SM 4500 SO4 E	
MB 400-356536/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-356536/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-356536/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-138811-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-138811-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 356798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138811-8	AX12602 MW-2	Total/NA	Water	SM 4500 CI- E	
400-138811-9	AX12604 MW-3	Total/NA	Water	SM 4500 CI- E	
400-138811-10	AX12605 MW-4	Total/NA	Water	SM 4500 CI- E	
400-138811-12	AX12603 MW-2 DUP	Total/NA	Water	SM 4500 CI- E	
400-138811-13	AX12606 FB-1	Total/NA	Water	SM 4500 CI- E	
400-138811-14	AX12607 MW-10	Total/NA	Water	SM 4500 CI- E	
400-138811-15	AX12608 MW-12	Total/NA	Water	SM 4500 CI- E	
400-138811-16	AX12609 EB-1	Total/NA	Water	SM 4500 CI- E	
MB 400-356798/28	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-356798/29	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-356798/25	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-138811-14 MS	AX12607 MW-10	Total/NA	Water	SM 4500 CI- E	
400-138811-14 MSD	AX12607 MW-10	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 356862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138811-8	AX12602 MW-2	Total/NA	Water	SM 4500 SO4 E	
400-138811-12	AX12603 MW-2 DUP	Total/NA	Water	SM 4500 SO4 E	
400-138811-13	AX12606 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-138811-14	AX12607 MW-10	Total/NA	Water	SM 4500 SO4 E	
MB 400-356862/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-356862/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-356862/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-138811-14 MS	AX12607 MW-10	Total/NA	Water	SM 4500 SO4 E	
400-138811-14 MSD	AX12607 MW-10	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 356957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138811-9	AX12604 MW-3	Total/NA	Water	SM 4500 SO4 E	
400-138811-10	AX12605 MW-4	Total/NA	Water	SM 4500 SO4 E	
400-138811-15	AX12608 MW-12	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: 400-138811-2
 SDG: Gorgas Landfill (8)

General Chemistry (Continued)

Analysis Batch: 356957 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138811-16	AX12609 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-356957/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-356957/37	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-356957/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-138927-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-138927-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 357755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138811-7	AX12600 MW-1	Total/NA	Water	SM 4500 F C	
400-138811-8	AX12602 MW-2	Total/NA	Water	SM 4500 F C	
400-138811-9	AX12604 MW-3	Total/NA	Water	SM 4500 F C	
400-138811-10	AX12605 MW-4	Total/NA	Water	SM 4500 F C	
400-138811-11	AX12601 MW-11	Total/NA	Water	SM 4500 F C	
400-138811-12	AX12603 MW-2 DUP	Total/NA	Water	SM 4500 F C	
400-138811-13	AX12606 FB-1	Total/NA	Water	SM 4500 F C	
400-138811-16	AX12609 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-357755/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-357755/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-138811-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-138811-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-138811-9 DU	AX12604 MW-3	Total/NA	Water	SM 4500 F C	

Analysis Batch: 358003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138811-14	AX12607 MW-10	Total/NA	Water	SM 4500 F C	
400-138811-15	AX12608 MW-12	Total/NA	Water	SM 4500 F C	
MB 400-358003/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-358003/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-138811-14 MS	AX12607 MW-10	Total/NA	Water	SM 4500 F C	
400-138811-14 MSD	AX12607 MW-10	Total/NA	Water	SM 4500 F C	
400-138851-B-1 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 360220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138811-15	AX12608 MW-12	Total/NA	Water	SM 4500 Cl- E	
MB 400-360220/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-360220/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-360220/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

QC Sample Results

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-356520/6
Matrix: Water
Analysis Batch: 356520

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			06/10/17 09:11	1

Lab Sample ID: LCS 400-356520/7
Matrix: Water
Analysis Batch: 356520

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	27.5		mg/L		92	90 - 110

Lab Sample ID: MRL 400-356520/13
Matrix: Water
Analysis Batch: 356520

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	1.61	J	mg/L		80	50 - 150

Lab Sample ID: 400-138811-A-4 MS
Matrix: Water
Analysis Batch: 356520

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	15		10.0	25.1		mg/L		106	73 - 120

Lab Sample ID: 400-138811-A-4 MSD
Matrix: Water
Analysis Batch: 356520

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	15		10.0	25.2		mg/L		107	73 - 120	0	8

Lab Sample ID: MB 400-356798/28
Matrix: Water
Analysis Batch: 356798

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			06/13/17 11:42	1

Lab Sample ID: LCS 400-356798/29
Matrix: Water
Analysis Batch: 356798

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	32.3		mg/L		108	90 - 110

Lab Sample ID: MRL 400-356798/25
Matrix: Water
Analysis Batch: 356798

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	2.05		mg/L		102	50 - 150

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

Lab Sample ID: 400-138811-14 MS
Matrix: Water
Analysis Batch: 356798

Client Sample ID: AX12607 MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.2		10.0	14.8		mg/L		115	73 - 120

Lab Sample ID: 400-138811-14 MSD
Matrix: Water
Analysis Batch: 356798

Client Sample ID: AX12607 MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	3.2		10.0	14.9		mg/L		117	73 - 120	1	8

Lab Sample ID: MB 400-360220/6
Matrix: Water
Analysis Batch: 360220

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			07/12/17 14:55	1

Lab Sample ID: LCS 400-360220/7
Matrix: Water
Analysis Batch: 360220

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	29.8		mg/L		99	90 - 110

Lab Sample ID: MRL 400-360220/3
Matrix: Water
Analysis Batch: 360220

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	1.76	J	mg/L		88	50 - 150

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-357755/3
Matrix: Water
Analysis Batch: 357755

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			06/20/17 16:58	1

Lab Sample ID: LCS 400-357755/4
Matrix: Water
Analysis Batch: 357755

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

QC Sample Results

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-138811-A-4 MS
Matrix: Water
Analysis Batch: 357755

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
Fluoride	0.16	F2	1.00	1.04		mg/L		88	75 - 125

Lab Sample ID: 400-138811-A-4 MSD
Matrix: Water
Analysis Batch: 357755

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
Fluoride	0.16	F2	1.00	1.10	F2	mg/L		95	75 - 125	6	4

Lab Sample ID: 400-138811-9 DU
Matrix: Water
Analysis Batch: 357755

Client Sample ID: AX12604 MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.37		0.368		mg/L		0	4

Lab Sample ID: MB 400-358003/3
Matrix: Water
Analysis Batch: 358003

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			06/22/17 12:15	1

Lab Sample ID: LCS 400-358003/4
Matrix: Water
Analysis Batch: 358003

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: 400-138811-14 MS
Matrix: Water
Analysis Batch: 358003

Client Sample ID: AX12607 MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.18		1.00	1.06		mg/L		88	75 - 125

Lab Sample ID: 400-138811-14 MSD
Matrix: Water
Analysis Batch: 358003

Client Sample ID: AX12607 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	0.18		1.00	1.08		mg/L		90	75 - 125	2	4

Lab Sample ID: 400-138851-B-1 DU
Matrix: Water
Analysis Batch: 358003

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.18		0.180		mg/L		0	4

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-356536/6
Matrix: Water
Analysis Batch: 356536

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			06/10/17 12:58	1

Lab Sample ID: LCS 400-356536/7
Matrix: Water
Analysis Batch: 356536

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 400-356536/3
Matrix: Water
Analysis Batch: 356536

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	4.19	J	mg/L		84	50 - 150

Lab Sample ID: 400-138811-A-4 MS
Matrix: Water
Analysis Batch: 356536

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	1500	F1	600	1370	F1	mg/L		-17	77 - 128

Lab Sample ID: 400-138811-A-4 MSD
Matrix: Water
Analysis Batch: 356536

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	1500	F1	600	1370	F1	mg/L		-16	77 - 128	0	5

Lab Sample ID: MB 400-356862/6
Matrix: Water
Analysis Batch: 356862

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			06/13/17 17:52	1

Lab Sample ID: LCS 400-356862/7
Matrix: Water
Analysis Batch: 356862

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		102	90 - 110

QC Sample Results

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-356862/3
Matrix: Water
Analysis Batch: 356862

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	4.48	J	mg/L		90	50 - 150

Lab Sample ID: 400-138811-14 MS
Matrix: Water
Analysis Batch: 356862

Client Sample ID: AX12607 MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	700	F1	400	616	F1	mg/L		-21	77 - 128

Lab Sample ID: 400-138811-14 MSD
Matrix: Water
Analysis Batch: 356862

Client Sample ID: AX12607 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
Sulfate	700	F1	400	598	F1	mg/L		-25	77 - 128	3	5

Lab Sample ID: MB 400-356957/6
Matrix: Water
Analysis Batch: 356957

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			06/14/17 11:24	1

Lab Sample ID: LCS 400-356957/37
Matrix: Water
Analysis Batch: 356957

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	16.0		mg/L		107	90 - 110

Lab Sample ID: MRL 400-356957/3
Matrix: Water
Analysis Batch: 356957

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	4.91	J	mg/L		98	50 - 150

Lab Sample ID: 400-138927-A-1 MS
Matrix: Water
Analysis Batch: 356957

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	4.7	J	10.0	13.1		mg/L		84	77 - 128

Lab Sample ID: 400-138927-A-1 MSD
Matrix: Water
Analysis Batch: 356957

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	4.7	J	10.0	13.1		mg/L		84	77 - 128	0	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-138811-2
SDG: Gorgas Landfill (8)

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TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax: (850) 478-2871

Chain of Custody Record

TestAmerica
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Client Information
 Client Contact: Jason Rous
 Phone: [Blank]
 Lab P#: Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.com

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 (8)

Due Date Requested: [Blank]
TAT Requested (days): Routine
PO #: [Blank]
NO #: [Blank]
Project #: 40007143
ISDN#: [Blank]

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, G=soil, Over-satd, BR=Trace, A=H)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS MSD (Yes or No)	SM 4500 F ₀	SM 4500 Cl _R	SM 4500 SO ₄ E	Total Number of Containers	Special Instructions/Note:
AX12601	5/30/17	1538	G	Water		X	N	X	X	X	1	MW-11
AX12603	5/31/17	0906	G	Water		X	N	X	X	X	1	MW-2 Dup (Sample Duplicate)
AX12606	5/31/17	1240	G	Water		X	N	X	X	X	1	FB-1 (Field Blank)
AX12607	5/31/17	1408	G	Water		Y	N	X	X	X	1	MW-10
AX12608	5/31/17	1605	G	Water		X	N	X	X	X	1	MW-12
AX12609	5/31/17	1643	G	Water		X	N	X	X	X	1	EB-1 (Equipment Blank)
AX12600	5/30/17	1211	G	Water		X	N	X	X	X	1	MW-1
AX12602	5/31/17	0906	G	Water		X	N	X	X	X	1	MW-2
AX12604	5/31/17	1050	G	Water		X	N	X	X	X	1	MW-3
AX12605	5/31/17	1228	G	Water		X	N	X	X	X	1	MW-4

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

Deliverable Requested: Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Empty Kit Relinquished by: Sarah Copeland
 Date/Time: 06/05/2017: 1615
 Company: APC

Relinquished by: [Signature]
 Date/Time: [Blank]
 Company: Company

Relinquished by: [Signature]
 Date/Time: [Blank]
 Company: Company

Custody Seals Intact: Yes No
 Custody Seal No.: [Blank]
 Cooler Temperature(s) °C and Other Remarks: [Blank]



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-138811-2
SDG Number: Gorgas Landfill (8)

Login Number: 138811
List Number: 1
Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	23.0°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Accreditation/Certification Summary

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

TestAmerica Job ID: 400-138811-2
 SDG: Gorgas Landfill (8)

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	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
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	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17 *
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-17 *
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
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.

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-138820-2

TestAmerica Sample Delivery Group: Gorgas Landfill (8)

Client Project/Site: CCR Plant Gorgas

For:

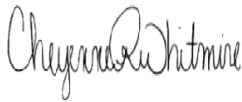
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

7/7/2017 4:49:00 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Method Summary

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

TestAmerica Job ID: 400-138820-2
SDG: Gorgas Landfill (8)

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: 400-138820-2
SDG: Gorgas Landfill (8)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-138820-7	AX12610 MW-1	Water	05/30/17 12:11	06/05/17 15:30
400-138820-8	AX12612 MW-2	Water	05/31/17 09:06	06/05/17 15:30
400-138820-9	AX12614 MW-3	Water	05/31/17 10:50	06/05/17 15:30
400-138820-10	AX12615 MW-4	Water	05/31/17 12:28	06/05/17 15:30
400-138820-11	AX12611 MW-11	Water	05/30/17 15:38	06/05/17 15:30
400-138820-12	AX12613 MW-2 DUP	Water	05/31/17 09:06	06/05/17 15:30
400-138820-13	AX12616 FB-1	Water	05/31/17 12:40	06/05/17 15:30
400-138820-14	AX12617 MW-10	Water	05/31/17 14:08	06/05/17 15:30
400-138820-15	AX12618 MW-12	Water	05/31/17 16:05	06/05/17 15:30
400-138820-16	AX12619 EB-1	Water	05/31/17 16:43	06/05/17 15:30

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12610 MW-1

Lab Sample ID: 400-138820-7

Date Collected: 05/30/17 12:11

Matrix: Water

Date Received: 06/05/17 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.109	U	0.0856	0.0862	1.00	0.124	pCi/L	06/09/17 10:40	07/03/17 07:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					06/09/17 10:40	07/03/17 07:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0397	U	0.228	0.228	1.00	0.407	pCi/L	06/09/17 12:20	06/20/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					06/09/17 12:20	06/20/17 11:05	1
Y Carrier	85.2		40 - 110					06/09/17 12:20	06/20/17 11:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.149	U	0.243	0.243	5.00	0.407	pCi/L		07/05/17 16:51	1

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12612 MW-2

Lab Sample ID: 400-138820-8

Date Collected: 05/31/17 09:06

Matrix: Water

Date Received: 06/05/17 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0460	U	0.0614	0.0616	1.00	0.103	pCi/L	06/09/17 10:40	07/03/17 07:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					06/09/17 10:40	07/03/17 07:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.132	U	0.270	0.271	1.00	0.464	pCi/L	06/09/17 12:20	06/20/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					06/09/17 12:20	06/20/17 11:05	1
Y Carrier	84.1		40 - 110					06/09/17 12:20	06/20/17 11:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.178	U	0.277	0.278	5.00	0.464	pCi/L		07/05/17 16:51	1

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12614 MW-3

Lab Sample ID: 400-138820-9

Date Collected: 05/31/17 10:50

Matrix: Water

Date Received: 06/05/17 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.178		0.0956	0.0970	1.00	0.112	pCi/L	06/09/17 10:40	07/03/17 07:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					06/09/17 10:40	07/03/17 07:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.622		0.330	0.335	1.00	0.492	pCi/L	06/09/17 12:20	06/20/17 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					06/09/17 12:20	06/20/17 11:06	1
Y Carrier	88.2		40 - 110					06/09/17 12:20	06/20/17 11:06	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	0.800		0.344	0.349	5.00	0.492	pCi/L		07/05/17 16:51	1

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12615 MW-4

Lab Sample ID: 400-138820-10

Date Collected: 05/31/17 12:28

Matrix: Water

Date Received: 06/05/17 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.115	U	0.0872	0.0878	1.00	0.124	pCi/L	06/09/17 10:40	07/03/17 07:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					06/09/17 10:40	07/03/17 07:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.186	U	0.272	0.272	1.00	0.456	pCi/L	06/09/17 12:20	06/20/17 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					06/09/17 12:20	06/20/17 11:06	1
Y Carrier	86.4		40 - 110					06/09/17 12:20	06/20/17 11:06	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	0.300	U	0.286	0.286	5.00	0.456	pCi/L		07/05/17 16:51	1

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12611 MW-11

Lab Sample ID: 400-138820-11

Date Collected: 05/30/17 15:38

Matrix: Water

Date Received: 06/05/17 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.283		0.107	0.110	1.00	0.0972	pCi/L	06/09/17 10:40	07/03/17 07:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					06/09/17 10:40	07/03/17 07:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.715		0.285	0.293	1.00	0.386	pCi/L	06/09/17 12:20	06/20/17 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					06/09/17 12:20	06/20/17 11:06	1
Y Carrier	87.9		40 - 110					06/09/17 12:20	06/20/17 11:06	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	0.998		0.305	0.313	5.00	0.386	pCi/L		07/05/17 16:51	1

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12613 MW-2 DUP

Lab Sample ID: 400-138820-12

Date Collected: 05/31/17 09:06

Matrix: Water

Date Received: 06/05/17 15:30

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		0.107	0.109	1.00	0.130	pCi/L	06/09/17 10:40	07/03/17 07:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					06/09/17 10:40	07/03/17 07:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.678		0.314	0.320	1.00	0.447	pCi/L	06/09/17 12:20	06/20/17 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					06/09/17 12:20	06/20/17 11:06	1
Y Carrier	87.1		40 - 110					06/09/17 12:20	06/20/17 11:06	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	0.893		0.331	0.338	5.00	0.447	pCi/L		07/05/17 16:51	1

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12616 FB-1

Lab Sample ID: 400-138820-13

Date Collected: 05/31/17 12:40

Matrix: Water

Date Received: 06/05/17 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0339	U	0.0666	0.0667	1.00	0.120	pCi/L	06/09/17 10:40	07/03/17 07:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					06/09/17 10:40	07/03/17 07:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.00		0.373	0.384	1.00	0.526	pCi/L	06/09/17 12:20	06/20/17 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					06/09/17 12:20	06/20/17 11:06	1
Y Carrier	93.5		40 - 110					06/09/17 12:20	06/20/17 11:06	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	1.03		0.379	0.390	5.00	0.526	pCi/L		07/05/17 16:51	1

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12617 MW-10

Lab Sample ID: 400-138820-14

Date Collected: 05/31/17 14:08

Matrix: Water

Date Received: 06/05/17 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.225		0.104	0.106	1.00	0.111	pCi/L	06/09/17 10:40	07/03/17 07:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					06/09/17 10:40	07/03/17 07:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.966		0.355	0.366	1.00	0.486	pCi/L	06/09/17 12:20	06/20/17 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					06/09/17 12:20	06/20/17 11:06	1
Y Carrier	89.7		40 - 110					06/09/17 12:20	06/20/17 11:06	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	1.19		0.370	0.381	5.00	0.486	pCi/L		07/05/17 16:51	1

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12618 MW-12

Lab Sample ID: 400-138820-15

Date Collected: 05/31/17 16:05

Matrix: Water

Date Received: 06/05/17 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.167		0.100	0.101	1.00	0.129	pCi/L	06/09/17 10:40	07/03/17 07:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.1		40 - 110					06/09/17 10:40	07/03/17 07:08	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		0.417	0.432	1.00	0.559	pCi/L	06/09/17 12:20	06/20/17 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.1		40 - 110					06/09/17 12:20	06/20/17 11:06	1
Y Carrier	81.9		40 - 110					06/09/17 12:20	06/20/17 11:06	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	1.40		0.429	0.444	5.00	0.559	pCi/L		07/05/17 16:51	1

Client Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12619 EB-1

Lab Sample ID: 400-138820-16

Date Collected: 05/31/17 16:43

Matrix: Water

Date Received: 06/05/17 15:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0721	U	0.0672	0.0675	1.00	0.0995	pCi/L	06/09/17 10:40	07/03/17 07:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					06/09/17 10:40	07/03/17 07:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0244	U	0.232	0.232	1.00	0.428	pCi/L	06/09/17 12:20	06/20/17 11:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					06/09/17 12:20	06/20/17 11:06	1
Y Carrier	82.6		40 - 110					06/09/17 12:20	06/20/17 11:06	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	0.0477	U	0.242	0.242	5.00	0.428	pCi/L		07/05/17 16:51	1

Definitions/Glossary

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

TestAmerica Job ID: 400-138820-2
SDG: Gorgas Landfill (8)

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: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12610 MW-1
Date Collected: 05/30/17 12:11
Date Received: 06/05/17 15:30

Lab Sample ID: 400-138820-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:07	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:05	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	RTM	TAL SL

Client Sample ID: AX12612 MW-2
Date Collected: 05/31/17 09:06
Date Received: 06/05/17 15:30

Lab Sample ID: 400-138820-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:07	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:05	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	RTM	TAL SL

Client Sample ID: AX12614 MW-3
Date Collected: 05/31/17 10:50
Date Received: 06/05/17 15:30

Lab Sample ID: 400-138820-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:07	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:06	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	RTM	TAL SL

Client Sample ID: AX12615 MW-4
Date Collected: 05/31/17 12:28
Date Received: 06/05/17 15:30

Lab Sample ID: 400-138820-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:07	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:06	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12611 MW-11

Lab Sample ID: 400-138820-11

Date Collected: 05/30/17 15:38

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:07	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:06	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	RTM	TAL SL

Client Sample ID: AX12613 MW-2 DUP

Lab Sample ID: 400-138820-12

Date Collected: 05/31/17 09:06

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:08	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:06	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	RTM	TAL SL

Client Sample ID: AX12616 FB-1

Lab Sample ID: 400-138820-13

Date Collected: 05/31/17 12:40

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:08	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:06	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	RTM	TAL SL

Client Sample ID: AX12617 MW-10

Lab Sample ID: 400-138820-14

Date Collected: 05/31/17 14:08

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:08	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:06	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Client Sample ID: AX12618 MW-12

Lab Sample ID: 400-138820-15

Date Collected: 05/31/17 16:05

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:08	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:06	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	RTM	TAL SL

Client Sample ID: AX12619 EB-1

Lab Sample ID: 400-138820-16

Date Collected: 05/31/17 16:43

Matrix: Water

Date Received: 06/05/17 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			312823	06/09/17 10:40	LDE	TAL SL
Total/NA	Analysis	9315		1	10664	07/03/17 07:08	ALD	TAL SL
Total/NA	Prep	PrecSep_0			312852	06/09/17 12:20	LDE	TAL SL
Total/NA	Analysis	9320		1	314195	06/20/17 11:06	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316322	07/05/17 16:51	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: 400-138820-2
SDG: Gorgas Landfill (8)

Rad

Prep Batch: 312823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138820-7	AX12610 MW-1	Total/NA	Water	PrecSep-21	
400-138820-8	AX12612 MW-2	Total/NA	Water	PrecSep-21	
400-138820-9	AX12614 MW-3	Total/NA	Water	PrecSep-21	
400-138820-10	AX12615 MW-4	Total/NA	Water	PrecSep-21	
400-138820-11	AX12611 MW-11	Total/NA	Water	PrecSep-21	
400-138820-12	AX12613 MW-2 DUP	Total/NA	Water	PrecSep-21	
400-138820-13	AX12616 FB-1	Total/NA	Water	PrecSep-21	
400-138820-14	AX12617 MW-10	Total/NA	Water	PrecSep-21	
400-138820-15	AX12618 MW-12	Total/NA	Water	PrecSep-21	
400-138820-16	AX12619 EB-1	Total/NA	Water	PrecSep-21	
MB 160-312823/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-312823/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-138820-11 DU	AX12611 MW-11	Total/NA	Water	PrecSep-21	
400-138820-A-3-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 312852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138820-7	AX12610 MW-1	Total/NA	Water	PrecSep_0	
400-138820-8	AX12612 MW-2	Total/NA	Water	PrecSep_0	
400-138820-9	AX12614 MW-3	Total/NA	Water	PrecSep_0	
400-138820-10	AX12615 MW-4	Total/NA	Water	PrecSep_0	
400-138820-11	AX12611 MW-11	Total/NA	Water	PrecSep_0	
400-138820-12	AX12613 MW-2 DUP	Total/NA	Water	PrecSep_0	
400-138820-13	AX12616 FB-1	Total/NA	Water	PrecSep_0	
400-138820-14	AX12617 MW-10	Total/NA	Water	PrecSep_0	
400-138820-15	AX12618 MW-12	Total/NA	Water	PrecSep_0	
400-138820-16	AX12619 EB-1	Total/NA	Water	PrecSep_0	
MB 160-312852/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-312852/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-138820-11 DU	AX12611 MW-11	Total/NA	Water	PrecSep_0	
400-138820-A-3-D DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-312823/1-A
Matrix: Water
Analysis Batch: 10664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 312823

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04258	U	0.0588	0.0589	1.00	0.0991	pCi/L	06/09/17 10:40	07/03/17 07:05	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					06/09/17 10:40	07/03/17 07:05	1

Lab Sample ID: LCS 160-312823/2-A
Matrix: Water
Analysis Batch: 10664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 312823

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.1	12.73		1.33	1.00	0.106	pCi/L	84	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	95.0		40 - 110						

Lab Sample ID: 400-138820-11 DU
Matrix: Water
Analysis Batch: 10664

Client Sample ID: AX12611 MW-11
Prep Type: Total/NA
Prep Batch: 312823

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.283		0.2906		0.126	1.00	0.139	pCi/L	0.03	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	92.3		40 - 110							

Lab Sample ID: 400-138820-A-3-A DU
Matrix: Water
Analysis Batch: 10664

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 312823

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.101	U	-0.01157	U	0.0498	1.00	0.115	pCi/L	0.86	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	94.4		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-312852/1-A
Matrix: Water
Analysis Batch: 314195

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 312852

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2126	U	0.269	0.270	1.00	0.446	pCi/L	06/09/17 12:20	06/20/17 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					06/09/17 12:20	06/20/17 11:04	1
Y Carrier	87.5		40 - 110					06/09/17 12:20	06/20/17 11:04	1

Lab Sample ID: LCS 160-312852/2-A
Matrix: Water
Analysis Batch: 314195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 312852

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	17.7	20.86		2.20	1.00	0.437	pCi/L	118	56 - 140
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	95.0		40 - 110						
Y Carrier	86.7		40 - 110						

Lab Sample ID: 400-138820-11 DU
Matrix: Water
Analysis Batch: 314195

Client Sample ID: AX12611 MW-11
Prep Type: Total/NA
Prep Batch: 312852

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.715		0.2926	U	0.351	1.00	0.578	pCi/L	0.66	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	92.3		40 - 110							
Y Carrier	89.7		40 - 110							

Lab Sample ID: 400-138820-A-3-D DU
Matrix: Water
Analysis Batch: 314195

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 312852

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.623		0.3170	U	0.262	1.00	0.411	pCi/L	0.56	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	94.4		40 - 110							
Y Carrier	85.2		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-138820-2
 SDG: Gorgas Landfill (8)

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

Lab Sample ID: 400-138820-11 DU
 Matrix: Water
 Analysis Batch: 316322

Client Sample ID: AX12611 MW-11
 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	0.998		0.5832		0.373	5.00	0.578	pCi/L	0.60	

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TestAmerica Pensacola

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

Chain of Custody Record



Client Information 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: Gorgias Landfill (8)		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Lab No: 400-56525-24537.1 Page: 1 of 1 Job #: 400-158826						
Due Date Requested: TAT Requested (days): Routine PO #: WO #: Project #: 40007143 SSOV#:		Analysis Requested Total Number of Containers:						
Sample Identification	Sample Date	Sample Time	Sample Type (C-comp, G-grab)	Matrix (Water, Soil, Sediment, Op-tissue, Air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Special Instructions/Note:
AX12611	5/30/17	1538	G	Water		X	X	3 MW-11
AX12613	5/31/17	0906	G	Water		X	X	1 MW-2 Dup (Sample Duplicate)
AX12616	5/31/17	1240	G	Water		X	X	1 FB-1 (Field Blank)
AX12617	5/31/17	1408	G	Water		X	X	1 MW-10
AX12618	5/31/17	1605	G	Water		X	X	1 MW-12
AX12619	5/31/17	1643	G	Water		X	X	1 EB-1 (Equipment Blank)
AX12610	5/30/17	1211	G	Water		X	X	1 MW-1
AX12612	5/31/17	0906	G	Water		X	X	1 MW-2
AX12614	5/31/17	1050	G	Water		X	X	1 MW-3
AX12615	5/31/17	1228	G	Water		X	X	1 MW-4
Possible Hazard Identification <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					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			
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:			
Empty Kit Relinquished by: Sarah Copeland Relinquished by: Relinquished by: Relinquished by:					Method of Shipment: Date/Time: 06/05/2017; 1700 Date/Time: Date/Time: Date/Time:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:					Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-138820-2
SDG Number: Gorgas Landfill (8)

Login Number: 138820

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	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 <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: 400-138820-2
 SDG: Gorgas Landfill (8)

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	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
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	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17 *
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-17 *
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
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
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	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17 *
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17 *
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18

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

TestAmerica Pensacola

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-138820-2
SDG: Gorgas Landfill (8)

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	06-30-17 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17 *
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-17 *
Texas	NELAP	6	T104704193-16-10	07-31-17 *
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17 *
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-17 *
West Virginia DEP	State Program	3	381	08-31-17 *

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

TestAmerica Pensacola



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

- Field Complete
- Lab Complete

Lab ETA 06/01/2017 07:15

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Jason Rouss	Location	Gorgas Landfill
Analysis Requested	Bottle 1 (1L): Radiological		
Comments	Radium duplicate collected at MW-11. No temperature preservation requirement.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	05/30/2017	12:11	1	Groundwater		AX12610
MW-11	05/30/2017	15:38	3	Groundwater		AX12611
MW-2	05/31/2017	09:06	1	Groundwater		AX12612
MW-2 Dup	05/31/2017	09:06	1	Sample Duplicate		AX12613
MW-3	05/31/2017	10:50	1	Groundwater		AX12614
MW-4	05/31/2017	12:28	1	Groundwater		AX12615
FB-1	05/31/2017	12:40	1	Field Blank		AX12616
MW-10	05/31/2017	14:08	1	Groundwater		AX12617
MW-12	05/31/2017	16:05	1	Groundwater		AX12618
EB-1	05/31/2017	16:43	1	Equipment Blank		AX12619

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.06.01 15:07:39 -0500</small>	06/01/2017 15:07

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	4677-23342-4-1		
Cooler Temp	NA		
Thermometer ID	NA	pH Strip ID	5521-28262-20-6

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

 Alabama Power



Sample Group : WMWGORLF_1112

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1112

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 anions were outsourced to Test America, Pensacola, for analysis. Listed below is the job narrative provided by Test America.

Job Narrative
400-142502-1
General Chemistry

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 367128 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 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: (400-142502-A-12), (400-142502-A-12 MS), (400-142502-A-12 MSD), (400-142502-A-15), (400-142502-A-15 MS) and (400-142502-A-15 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 367158 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 367463 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: AX19991 MW-1DUP (400-142502-1), AX19997 MW-12 (400-142502-4), AX19998 MW-10 (400-142502-5), AX19998 MW-10 (400-142502-5[MS]), AX19998 MW-10 (400-142502-5[MSD]), AX19990 MW-1 (400-142502-7), AX19992 MW-2 (400-142502-8), AX19994 MW-3 (400-142502-9), AX19995 MW-4 (400-142502-10), (400-142502-A-12), (400-142502-A-12 MS), (400-142502-A-12 MSD), (400-142503-A-20), (400-142503-A-20 MS) and (400-142503-A-20 MSD). Elevated reporting limits (RLs) are provided.



Metals ICP

Gorgas Landfill

WMWGORLF_1112

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>
AX19990	20170908GK & 20170914D3K	WMWGORLF_1112
AX19991	20170908GK & 20170914D3K	WMWGORLF_1112
AX19992	20170908GK & 20170914D3K	WMWGORLF_1112
AX19993	20170908GK	WMWGORLF_1112
AX19994	20170908GK & 20170914D3K	WMWGORLF_1112
AX19995	20170908GK & 20170914D3K	WMWGORLF_1112
AX19996	20170908GK & 20170914D3K	WMWGORLF_1112
AX19997	20170908GK & 20170914D3K	WMWGORLF_1112
AX19998	20170908GK & 20170914D3K	WMWGORLF_1112
AX19999	20170908GK	WMWGORLF_1112

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.
7. The following samples were revised to reflect the correct project MDL and RLs for Calcium: AX19990, AX19991, AX19992, AX19994, AX19995, AX19996, AX19997 & AX19998.

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, with the following exception:

<u>Analyte</u>	<u>Sample ID</u>
Calcium	AX19995

The concentrations of the 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.
8. All samples were analyzed at a x2 dilution. However, the following samples were further 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>
AX19990	Calcium	x10
AX19991	Calcium	x10
AX19992	Calcium	x10
AX19994	Calcium	x10
AX19995	Calcium	x10
AX19995MS	Calcium	x10
AX19995MSD	Calcium	x10
AX19996	Calcium	x10
AX19997	Calcium	x10
AX19998	Calcium	x10

9. The raw data results include results corrected for dilution.



TDS

Gorgas Landfill

WMWGORLF_1112

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>
AX19990	601913	WMWGORLF_1112
AX19991	601909	WMWGORLF_1112
AX19992	601909	WMWGORLF_1112
AX19993	601913	WMWGORLF_1112
AX19994	601913	WMWGORLF_1112
AX19995	601913	WMWGORLF_1112
AX19996	601909	WMWGORLF_1112
AX19997	601909	WMWGORLF_1112
AX19998	601913	WMWGORLF_1112
AX19999	601913	WMWGORLF_1112

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 0.5 mg 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 2.5 mg and 200 mg residue with the exception of AX19993 and AX19999 which did not meet the 2.5 mg residue requirement.

Alabama Power General Test Laboratory
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 Calera, AL 35040
 (205) 664-6032 or 6171
 FAX (205) 257-1654

Certificate Of Analysis



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX19990

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7		2	0.02	0.1	J 0.0253	mg/L
* Calcium, Total	HRG	9/14/2017	EPA 200.7		10	1.0	5.0	152	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C		1		125	2160	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E		1	0.60	2.00	2.7	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C		1	0.032	0.10	0.16	mg/L
* Sulfate, Total, by Test America	RRC	9/11/2017	SM 4500 SO4_E		50	70.0	250	1500	mg/L

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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

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Batch QC Summary



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To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX19990

Sample	Analysis	Units	MB	MB				LFB		Rec			Prec
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	20

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Batch QC Summary



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To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AX19990

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
				Limit			Duplicate	LFB	Limit	Prec	
AX19998	Solids, Dissolved	mg/L	5.00	25			1100	51.0	40 to 60	2.84	5

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Certificate Of Analysis  **Alabama Power**

Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-1DUP

Laboratory ID Number: AX19991

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7		2	0.02	0.1	J 0.0216	mg/L
* Calcium, Total	HRG	9/10/2017	EPA 200.7		10	1.0	5.0	148	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C		1		125	2280	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E		1	0.60	2.00	2.4	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C		1	0.032	0.10	0.16	mg/L
* Sulfate, Total, by Test America	RRC	9/11/2017	SM 4500 SO4_E		50	70.0	250	1500	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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Laboratory certification ID: E571114

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Expiration: June 30, 2018

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Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-1DUP

Laboratory ID Number: AX19991

Sample	Analysis	Units	MB	MB				LFB		Rec			Prec
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

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Batch QC Summary



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To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-1DUP

Laboratory ID Number: AX19991

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec		
				Limit			Duplicate	LFB	Limit	Limit	Prec	Limit
AX19992	Solids, Dissolved	mg/L	0.0000	25			1530	46.0	40 to 60		0.649	5

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To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX19992

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7		2	0.02	0.1	J 0.0267	mg/L
* Calcium, Total	HRG	9/14/2017	EPA 200.7		10	1.0	5.0	155	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C		1		100	1550	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E		1	0.60	2.00	4.4	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C		1	0.032	0.10	0.16	mg/L
* Sulfate, Total, by Test America	RRC	9/11/2017	SM 4500 SO4_E		30	42.0	150	920	mg/L

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Laboratory certification ID: E571114

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Batch QC Summary



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To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX19992

Sample	Analysis	Units	MB	MB				LFB		Rec			Prec
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	20

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Batch QC Summary



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To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AX19992

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX19992	Solids, Dissolved	mg/L	0.0000	25			1530	46.0	40 to 60	0.649	5

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Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX19993

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	9/8/2017	EPA 200.7		2	0.10	0.5	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E		1	0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	RRC	9/7/2017	SM 4500 SO4_E		1	1.40	5.00	U <1.4	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

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX19993

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX19993

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX19998	Solids, Dissolved	mg/L	5.00	25			1100	51.0	40 to 60	2.84	5

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Certificate Of Analysis



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To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX19994

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7		2	0.02	0.1	J 0.0425	mg/L
* Calcium, Total	HRG	9/14/2017	EPA 200.7		10	1.0	5.0	298	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C		1		250	4050	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E		1	0.60	2.00	J 1.8	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C		1	0.032	0.10	0.55	mg/L
* Sulfate, Total, by Test America	RRC	9/12/2017	SM 4500 SO4_E		90	130	450	2600	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
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Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX19994

Sample	Analysis	Units	MB	MB				LFB		Rec			Prec
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	20

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Expiration: June 30, 2018

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Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AX19994

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
				Limit			Duplicate	LFB	Limit	Prec	
AX19998	Solids, Dissolved	mg/L	5.00	25			1100	51.0	40 to 60	2.84	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

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Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX19995

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7	2		0.02	0.1	J 0.0420	mg/L
* Calcium, Total	HRG	9/14/2017	EPA 200.7	10		1.0	5.0	297	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C	1			250	3990	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E	1		0.60	2.00	2.3	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C	1		0.032	0.10	0.38	mg/L
* Sulfate, Total, by Test America	RRC	9/11/2017	SM 4500 SO4_E	90		130	450	2700	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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Laboratory certification ID: E571114

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010
 Recovery for Calcium is out of spec. The spike amount was less than 30% of the sample amount. AWR 10/13/17
 REVISED COPY: The Calcium MDL and RL were corrected for project limits.

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Batch QC Summary



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To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX19995

Sample	Analysis	Units	MB	MB				LFB		Rec			Prec
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	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
 Recovery for Calcium is out of spec. The spike amount was less than 30% of the sample amount. AWR 10/13/17
 REVISED COPY: The Calcium MDL and RL were corrected for project limits.

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



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AX19995

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec		
			Limit	Limit			Duplicate	LFB	Limit	Limit		
AX19998	Solids, Dissolved	mg/L	5.00	25			1100	51.0	40 to 60		2.84	5

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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**

Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX19996

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7		2	0.02	0.1	J 0.0968	mg/L
* Calcium, Total	HRG	9/14/2017	EPA 200.7		10	1.0	5.0	374	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C		1		250	2760	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E		1	0.60	2.00	2.8	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C		1	0.032	0.10	0.11	mg/L
* Sulfate, Total, by Test America	RRC	9/11/2017	SM 4500 SO4_E		50	70.0	250	1700	mg/L

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Expiration: June 30, 2018

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Alabama Power General Test Laboratory
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 (205) 664-6032 or 6171
 FAX (205) 257-1654

Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX19996

Sample	Analysis	Units	MB	MB				LFB		Rec			Prec
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	20

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Expiration: June 30, 2018

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 Calera, AL 35040
 (205) 664-6032 or 6171
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Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AX19996

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
				Limit			Duplicate	LFB	Limit	Prec	
AX19992	Solids, Dissolved	mg/L	0.0000	25			1530	46.0	40 to 60	0.649	5

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CC:

Alabama Power General Test Laboratory
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 Calera, AL 35040
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 FAX (205) 257-1654

Certificate Of Analysis



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX19997

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7		2	0.02	0.1	0.185	mg/L
* Calcium, Total	HRG	9/14/2017	EPA 200.7		10	1.0	5.0	349	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C		1		250	3250	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E		1	0.60	2.00	4.2	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C		1	0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	RRC	9/11/2017	SM 4500 SO4_E		70	98.0	350	2100	mg/L

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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



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX19997

Sample	Analysis	Units	MB	MB				LFB		Rec			Prec
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	20

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Expiration: June 30, 2018

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 FAX (205) 257-1654

Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AX19997

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec			
				Limit			Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX19992	Solids, Dissolved	mg/L	0.0000	25			1530	46.0	40 to 60			0.649	5

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 FAX (205) 257-1654

Certificate Of Analysis



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX19998

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7		2	0.02	0.1	0.181	mg/L
* Calcium, Total	HRG	9/14/2017	EPA 200.7		10	1.0	5.0	147	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C		1		100	1160	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E		1	0.60	2.00	6.1	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C		1	0.032	0.10	0.23	mg/L
* Sulfate, Total, by Test America	RRC	9/7/2017	SM 4500 SO4_E		20	28.0	100	700	mg/L

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010
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Alabama Power General Test Laboratory
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 FAX (205) 257-1654

Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX19998

Sample	Analysis	Units	MB	MB				LFB		Rec			Prec
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	20

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 FAX (205) 257-1654

Batch QC Summary



Revised Copy



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AX19998

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX19998	Solids, Dissolved	mg/L	5.00	25			1100	51.0	40 to 60			2.84	5

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 FAX (205) 257-1654

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFEB
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX19999

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	9/8/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	9/8/2017	EPA 200.7		2	0.10	0.5	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	8/29/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total, by Test America	RRC	9/7/2017	SM 4500 Cl_E		1	0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	BAB	9/12/2017	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	RRC	9/7/2017	SM 4500 SO4_E		1	1.40	5.00	U <1.4	mg/L

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Expiration: June 30, 2018

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFEB
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX19999

Sample	Analysis	Units	MB	MB				LFB		Rec			Prec
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX19995	Calcium, Total	mg/L	0.000846	0.22	5	295	304	4.39	4.25 to 5.75	-40.0	70 to 130	3.00	20
AX19995	Boron, Total	mg/L	0.000879	0.044	1.00	0.976	1.03	0.905	0.85 to 1.15	93.4	70 to 130	5.04	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFEB
 Sample Date: 23-Aug-17
 Customer ID:
 Delivery Date: 24-Aug-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX19999

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX19998	Solids, Dissolved	mg/L	5.00	25			1100	51.0	40 to 60	2.84	5

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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

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 (500mL): TDS, Bottle 3 (250mL) Anions		
Comments	All anions outsourced to Test America		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	08/23/2017	11:23	3	Groundwater		AX19990
MW-1DUP	08/23/2017	11:23	3	Sample Duplicate		AX19991
MW-2	08/23/2017	12:17	3	Groundwater		AX19992
FB-1	08/23/2017	12:22	3	Field Blank		AX19993
MW-3	08/23/2017	13:36	3	Groundwater		AX19994
MW-4	08/23/2017	14:30	3	Groundwater		AX19995
MW-11	08/23/2017	15:24	3	Groundwater		AX19996
MW-12	08/23/2017	16:36	3	Groundwater		AX19997
MW-10	08/23/2017	18:12	3	Groundwater		AX19998
EB-1	08/23/2017	18:31	3	Equipment Blank		AX19999

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southemco.com, c=US Date: 2017.08.24 09:43:00 -0500</small>	08/24/2017 09:43

SmarTroll ID	5141-26150-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20009-2-1	Cooler Temp
		1.0 degrees C
		Thermometer ID
		6035-30997-2-2
		pH Strip ID
		6153-32038-10-5

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: 400-142502-1

TestAmerica SDG: Plant Gorgas CCB Landfills

Client Project/Site: CCR Plant Gorgas

Revision: 3

For:

Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

10/13/2017 12:20:31 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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Visit us at:

www.testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-142502-1
SDG: Plant Gorgas CCB Landfills

Job ID: 400-142502-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-142502-1

General Chemistry

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 367128 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 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: (400-142502-A-12), (400-142502-A-12 MS), (400-142502-A-12 MSD), (400-142502-A-15), (400-142502-A-15 MS) and (400-142502-A-15 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 367158 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 367463 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: AX19991 MW-1DUP (400-142502-1), AX19997 MW-12 (400-142502-4), AX19998 MW-10 (400-142502-5), AX19998 MW-10 (400-142502-5[MS]), AX19998 MW-10 (400-142502-5[MSD]), AX19990 MW-1 (400-142502-7), AX19992 MW-2 (400-142502-8), AX19994 MW-3 (400-142502-9), AX19995 MW-4 (400-142502-10), (400-142502-A-12), (400-142502-A-12 MS), (400-142502-A-12 MSD), (400-142503-A-20), (400-142503-A-20 MS) and (400-142503-A-20 MSD). Elevated reporting limits (RLs) are provided.

Detection Summary

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

TestAmerica Job ID: 400-142502-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX19991 MW-1DUP

Lab Sample ID: 400-142502-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4		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	1500		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX19993 FB-1

Lab Sample ID: 400-142502-2

No Detections.

Client Sample ID: AX19996 MW-11

Lab Sample ID: 400-142502-3

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
Fluoride	0.11		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1700		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX19997 MW-12

Lab Sample ID: 400-142502-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.2		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	2100		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX19998 MW-10

Lab Sample ID: 400-142502-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.23		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	700	F1	100	28	mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: AX19999 EB-1

Lab Sample ID: 400-142502-6

No Detections.

Client Sample ID: AX19990 MW-1

Lab Sample ID: 400-142502-7

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	0.16		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1500		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX19992 MW-2

Lab Sample ID: 400-142502-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		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	920		150	42	mg/L	30		SM 4500 SO4 E	Total/NA

Client Sample ID: AX19994 MW-3

Lab Sample ID: 400-142502-9

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

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: 400-142502-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX19994 MW-3 (Continued)

Lab Sample ID: 400-142502-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.55		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2600		450	130	mg/L	90		SM 4500 SO4 E	Total/NA

Client Sample ID: AX19995 MW-4

Lab Sample ID: 400-142502-10

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	0.38		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

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: 400-142502-1
SDG: Plant Gorgas CCB Landfills

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



Sample Summary

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

TestAmerica Job ID: 400-142502-1
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-142502-1	AX19991 MW-1DUP	Water	08/23/17 11:23	08/29/17 09:40
400-142502-2	AX19993 FB-1	Water	08/23/17 12:22	08/29/17 09:40
400-142502-3	AX19996 MW-11	Water	08/23/17 15:24	08/29/17 09:40
400-142502-4	AX19997 MW-12	Water	08/23/17 16:36	08/29/17 09:40
400-142502-5	AX19998 MW-10	Water	08/23/17 18:12	08/29/17 09:40
400-142502-6	AX19999 EB-1	Water	08/23/17 18:31	08/29/17 09:40
400-142502-7	AX19990 MW-1	Water	08/23/17 11:23	08/29/17 09:40
400-142502-8	AX19992 MW-2	Water	08/23/17 12:17	08/29/17 09:40
400-142502-9	AX19994 MW-3	Water	08/23/17 13:36	08/29/17 09:40
400-142502-10	AX19995 MW-4	Water	08/23/17 14:30	08/29/17 09:40

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

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

TestAmerica Job ID: 400-142502-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX19991 MW-1DUP

Lab Sample ID: 400-142502-1

Date Collected: 08/23/17 11:23

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.4		2.0	0.60	mg/L			09/07/17 08:54	1
Fluoride	0.16		0.10	0.032	mg/L			09/12/17 08:50	1
Sulfate	1500		250	70	mg/L			09/11/17 09:15	50

Client Sample ID: AX19993 FB-1

Lab Sample ID: 400-142502-2

Date Collected: 08/23/17 12:22

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			09/07/17 08:55	1
Fluoride	<0.032		0.10	0.032	mg/L			09/12/17 08:52	1
Sulfate	<1.4		5.0	1.4	mg/L			09/07/17 13:52	1

Client Sample ID: AX19996 MW-11

Lab Sample ID: 400-142502-3

Date Collected: 08/23/17 15:24

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.8		2.0	0.60	mg/L			09/07/17 08:55	1
Fluoride	0.11		0.10	0.032	mg/L			09/12/17 08:55	1
Sulfate	1700		250	70	mg/L			09/11/17 09:20	50

Client Sample ID: AX19997 MW-12

Lab Sample ID: 400-142502-4

Date Collected: 08/23/17 16:36

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.2		2.0	0.60	mg/L			09/07/17 10:02	1
Fluoride	0.13		0.10	0.032	mg/L			09/12/17 09:22	1
Sulfate	2100		350	98	mg/L			09/11/17 09:48	70

Client Sample ID: AX19998 MW-10

Lab Sample ID: 400-142502-5

Date Collected: 08/23/17 18:12

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.1		2.0	0.60	mg/L			09/07/17 10:17	1
Fluoride	0.23		0.10	0.032	mg/L			09/12/17 09:01	1
Sulfate	700	F1	100	28	mg/L			09/07/17 14:43	20

Client Sample Results

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

TestAmerica Job ID: 400-142502-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX19999 EB-1

Lab Sample ID: 400-142502-6

Date Collected: 08/23/17 18:31

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			09/07/17 10:02	1
Fluoride	<0.032		0.10	0.032	mg/L			09/12/17 09:08	1
Sulfate	<1.4		5.0	1.4	mg/L			09/07/17 13:52	1

Client Sample ID: AX19990 MW-1

Lab Sample ID: 400-142502-7

Date Collected: 08/23/17 11:23

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		2.0	0.60	mg/L			09/07/17 10:02	1
Fluoride	0.16		0.10	0.032	mg/L			09/12/17 09:11	1
Sulfate	1500		250	70	mg/L			09/11/17 09:20	50

Client Sample ID: AX19992 MW-2

Lab Sample ID: 400-142502-8

Date Collected: 08/23/17 12:17

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		2.0	0.60	mg/L			09/07/17 10:02	1
Fluoride	0.16		0.10	0.032	mg/L			09/12/17 09:12	1
Sulfate	920		150	42	mg/L			09/11/17 08:52	30

Client Sample ID: AX19994 MW-3

Lab Sample ID: 400-142502-9

Date Collected: 08/23/17 13:36

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			09/07/17 10:02	1
Fluoride	0.55		0.10	0.032	mg/L			09/12/17 09:16	1
Sulfate	2600		450	130	mg/L			09/11/17 10:15	90

Client Sample ID: AX19995 MW-4

Lab Sample ID: 400-142502-10

Date Collected: 08/23/17 14:30

Matrix: Water

Date Received: 08/29/17 09:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		2.0	0.60	mg/L			09/07/17 10:02	1
Fluoride	0.38		0.10	0.032	mg/L			09/12/17 09:18	1
Sulfate	2700		450	130	mg/L			09/11/17 10:15	90

Definitions/Glossary

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

TestAmerica Job ID: 400-142502-1
SDG: Plant Gorgas CCB Landfills

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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: 400-142502-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX19991 MW-1DUP

Date Collected: 08/23/17 11:23

Date Received: 08/29/17 09:40

Lab Sample ID: 400-142502-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367054	09/07/17 08:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 08:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	367463	09/11/17 09:15	RRC	TAL PEN

Client Sample ID: AX19993 FB-1

Date Collected: 08/23/17 12:22

Date Received: 08/29/17 09:40

Lab Sample ID: 400-142502-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367054	09/07/17 08:55	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 08:52	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	367158	09/07/17 13:52	RRC	TAL PEN

Client Sample ID: AX19996 MW-11

Date Collected: 08/23/17 15:24

Date Received: 08/29/17 09:40

Lab Sample ID: 400-142502-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367054	09/07/17 08:55	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 08:55	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	367463	09/11/17 09:20	RRC	TAL PEN

Client Sample ID: AX19997 MW-12

Date Collected: 08/23/17 16:36

Date Received: 08/29/17 09:40

Lab Sample ID: 400-142502-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367092	09/07/17 10:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 09:22	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	367463	09/11/17 09:48	RRC	TAL PEN

Client Sample ID: AX19998 MW-10

Date Collected: 08/23/17 18:12

Date Received: 08/29/17 09:40

Lab Sample ID: 400-142502-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367092	09/07/17 10:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 09:01	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	367158	09/07/17 14:43	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-142502-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX19999 EB-1

Lab Sample ID: 400-142502-6

Date Collected: 08/23/17 18:31

Matrix: Water

Date Received: 08/29/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367092	09/07/17 10:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 09:08	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	367158	09/07/17 13:52	RRC	TAL PEN

Client Sample ID: AX19990 MW-1

Lab Sample ID: 400-142502-7

Date Collected: 08/23/17 11:23

Matrix: Water

Date Received: 08/29/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367092	09/07/17 10:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 09:11	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	367463	09/11/17 09:20	RRC	TAL PEN

Client Sample ID: AX19992 MW-2

Lab Sample ID: 400-142502-8

Date Collected: 08/23/17 12:17

Matrix: Water

Date Received: 08/29/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367092	09/07/17 10:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 09:12	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	367463	09/11/17 08:52	RRC	TAL PEN

Client Sample ID: AX19994 MW-3

Lab Sample ID: 400-142502-9

Date Collected: 08/23/17 13:36

Matrix: Water

Date Received: 08/29/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367092	09/07/17 10:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 09:16	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	367463	09/11/17 10:15	RRC	TAL PEN

Client Sample ID: AX19995 MW-4

Lab Sample ID: 400-142502-10

Date Collected: 08/23/17 14:30

Matrix: Water

Date Received: 08/29/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	367092	09/07/17 10:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	367615	09/12/17 09:18	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		90	367463	09/11/17 10:15	RRC	TAL PEN

Laboratory References:

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

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-142502-1
 SDG: Plant Gorgas CCB Landfills

General Chemistry

Analysis Batch: 367054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142502-1	AX19991 MW-1DUP	Total/NA	Water	SM 4500 Cl- E	
400-142502-2	AX19993 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-142502-3	AX19996 MW-11	Total/NA	Water	SM 4500 Cl- E	
MB 400-367054/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-367054/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-367054/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-142503-A-14 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-142503-A-14 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 367092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142502-4	AX19997 MW-12	Total/NA	Water	SM 4500 Cl- E	
400-142502-5	AX19998 MW-10	Total/NA	Water	SM 4500 Cl- E	
400-142502-6	AX19999 EB-1	Total/NA	Water	SM 4500 Cl- E	
400-142502-7	AX19990 MW-1	Total/NA	Water	SM 4500 Cl- E	
400-142502-8	AX19992 MW-2	Total/NA	Water	SM 4500 Cl- E	
400-142502-9	AX19994 MW-3	Total/NA	Water	SM 4500 Cl- E	
400-142502-10	AX19995 MW-4	Total/NA	Water	SM 4500 Cl- E	
MB 400-367092/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-367092/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-367092/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-142502-5 MS	AX19998 MW-10	Total/NA	Water	SM 4500 Cl- E	
400-142502-5 MSD	AX19998 MW-10	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 367128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-367128/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-367128/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-367128/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 367158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142502-2	AX19993 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-142502-5	AX19998 MW-10	Total/NA	Water	SM 4500 SO4 E	
400-142502-6	AX19999 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-367158/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-367158/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-367158/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-142502-5 MS	AX19998 MW-10	Total/NA	Water	SM 4500 SO4 E	
400-142502-5 MSD	AX19998 MW-10	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 367463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142502-1	AX19991 MW-1DUP	Total/NA	Water	SM 4500 SO4 E	
400-142502-3	AX19996 MW-11	Total/NA	Water	SM 4500 SO4 E	
400-142502-4	AX19997 MW-12	Total/NA	Water	SM 4500 SO4 E	
400-142502-7	AX19990 MW-1	Total/NA	Water	SM 4500 SO4 E	
400-142502-8	AX19992 MW-2	Total/NA	Water	SM 4500 SO4 E	
400-142502-9	AX19994 MW-3	Total/NA	Water	SM 4500 SO4 E	
400-142502-10	AX19995 MW-4	Total/NA	Water	SM 4500 SO4 E	
MB 400-367463/6	Method Blank	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: 400-142502-1
SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 367463 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-367463/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-367463/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-142502-A-12 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-142502-A-12 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 367615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142502-1	AX19991 MW-1DUP	Total/NA	Water	SM 4500 F C	
400-142502-2	AX19993 FB-1	Total/NA	Water	SM 4500 F C	
400-142502-3	AX19996 MW-11	Total/NA	Water	SM 4500 F C	
400-142502-4	AX19997 MW-12	Total/NA	Water	SM 4500 F C	
400-142502-5	AX19998 MW-10	Total/NA	Water	SM 4500 F C	
400-142502-6	AX19999 EB-1	Total/NA	Water	SM 4500 F C	
400-142502-7	AX19990 MW-1	Total/NA	Water	SM 4500 F C	
400-142502-8	AX19992 MW-2	Total/NA	Water	SM 4500 F C	
400-142502-9	AX19994 MW-3	Total/NA	Water	SM 4500 F C	
400-142502-10	AX19995 MW-4	Total/NA	Water	SM 4500 F C	
MB 400-367615/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-367615/5	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-142502-5 MS	AX19998 MW-10	Total/NA	Water	SM 4500 F C	
400-142502-5 MSD	AX19998 MW-10	Total/NA	Water	SM 4500 F C	

QC Sample Results

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

TestAmerica Job ID: 400-142502-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-367054/6
Matrix: Water
Analysis Batch: 367054

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			09/07/17 08:24	1

Lab Sample ID: LCS 400-367054/7
Matrix: Water
Analysis Batch: 367054

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	29.7		mg/L		99	90 - 110

Lab Sample ID: MRL 400-367054/3
Matrix: Water
Analysis Batch: 367054

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	1.98	J	mg/L		99	50 - 150

Lab Sample ID: 400-142503-A-14 MS
Matrix: Water
Analysis Batch: 367054

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	2.9		10.0	11.3		mg/L		84	73 - 120

Lab Sample ID: 400-142503-A-14 MSD
Matrix: Water
Analysis Batch: 367054

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	2.9		10.0	11.8		mg/L		89	73 - 120	4	8

Lab Sample ID: MB 400-367092/6
Matrix: Water
Analysis Batch: 367092

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			09/07/17 09:46	1

Lab Sample ID: LCS 400-367092/7
Matrix: Water
Analysis Batch: 367092

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	30.0		mg/L		100	90 - 110

Lab Sample ID: MRL 400-367092/3
Matrix: Water
Analysis Batch: 367092

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	1.98	J	mg/L		99	50 - 150

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-142502-1
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-142502-5 MS
Matrix: Water
Analysis Batch: 367092

Client Sample ID: AX19998 MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.1		10.0	16.9		mg/L		109	73 - 120

Lab Sample ID: 400-142502-5 MSD
Matrix: Water
Analysis Batch: 367092

Client Sample ID: AX19998 MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	6.1		10.0	16.9		mg/L		109	73 - 120	0	8

Lab Sample ID: MB 400-367128/6
Matrix: Water
Analysis Batch: 367128

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			09/07/17 11:22	1

Lab Sample ID: LCS 400-367128/7
Matrix: Water
Analysis Batch: 367128

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	30.5		mg/L		102	90 - 110

Lab Sample ID: MRL 400-367128/3
Matrix: Water
Analysis Batch: 367128

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	1.94	J	mg/L		97	50 - 150

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-367615/3
Matrix: Water
Analysis Batch: 367615

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			09/12/17 07:53	1

Lab Sample ID: LCS 400-367615/5
Matrix: Water
Analysis Batch: 367615

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	4.10		mg/L		103	90 - 110

QC Sample Results

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

TestAmerica Job ID: 400-142502-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-142502-5 MS
Matrix: Water
Analysis Batch: 367615

Client Sample ID: AX19998 MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.23		1.00	1.32	^	mg/L		109	75 - 125

Lab Sample ID: 400-142502-5 MSD
Matrix: Water
Analysis Batch: 367615

Client Sample ID: AX19998 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	0.23		1.00	1.35	^	mg/L		112	75 - 125	2	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-367158/6
Matrix: Water
Analysis Batch: 367158

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			09/07/17 13:21	1

Lab Sample ID: LCS 400-367158/7
Matrix: Water
Analysis Batch: 367158

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	13.7		mg/L		91	90 - 110

Lab Sample ID: MRL 400-367158/3
Matrix: Water
Analysis Batch: 367158

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	4.74	J	mg/L		95	50 - 150

Lab Sample ID: 400-142502-5 MS
Matrix: Water
Analysis Batch: 367158

Client Sample ID: AX19998 MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	700	F1	200	678	F1	mg/L		-9	77 - 128

Lab Sample ID: 400-142502-5 MSD
Matrix: Water
Analysis Batch: 367158

Client Sample ID: AX19998 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
Sulfate	700	F1	200	672	F1	mg/L		-12	77 - 128	1	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-142502-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MB 400-367463/6
Matrix: Water
Analysis Batch: 367463

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			09/11/17 07:58	1

Lab Sample ID: LCS 400-367463/7
Matrix: Water
Analysis Batch: 367463

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 400-367463/3
Matrix: Water
Analysis Batch: 367463

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	4.72	J	mg/L		94	50 - 150

Lab Sample ID: 400-142502-A-12 MS
Matrix: Water
Analysis Batch: 367463

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	1800	F1	700	1770	F1	mg/L		-3	77 - 128

Lab Sample ID: 400-142502-A-12 MSD
Matrix: Water
Analysis Batch: 367463

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	1800	F1	700	1750	F1	mg/L		-5	77 - 128	1	5

3355 McLamora Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2871

Chain of Custody Record

LABORATORY
10/10

Client Information		Carrier Tracking Note:		COC No:				
Client Contact:	Anthony Goggins	Carrier Tracking Note:		400-56525-24537.1				
Client Name:	Whitmine, Chayenne R	Carrier Tracking Note:		Page:	Page 1 of 1			
Client Address:	chayenne.whitmine@lestamercinc.com	Carrier Tracking Note:		Job #:				
Client Phone:		Carrier Tracking Note:						
Company:		Carrier Tracking Note:						
Address:	Alabama Power General Test Laboratory	Carrier Tracking Note:						
City:	744 County Rd 87 GSC #8	Carrier Tracking Note:						
State:	Alabama	Carrier Tracking Note:						
Zip:	35040	Carrier Tracking Note:						
Phone:	205-864-8004	Carrier Tracking Note:						
Fax:		Carrier Tracking Note:						
Email:	whitmine@alpower.com	Carrier Tracking Note:						
Project Name:	CCR	Carrier Tracking Note:						
Site:	Gorges Landfill	Carrier Tracking Note:						
Due Date Requested:		Carrier Tracking Note:						
LAB Requested (type):	Routine	Carrier Tracking Note:						
Project #:		Carrier Tracking Note:						
Project Name:		Carrier Tracking Note:						
Site:		Carrier Tracking Note:						
Sample Identification	Sample Date	Sample Time	Sample Type (Contemp, Grab)	Matrix (Groundwater, Surface Water, etc.)	Field Filtered Sample (Yes or No)	Partners MS/MSD (Yes or No)	Preservation Code	Special Instructions/Notes
AX19891	8/23/17	10:58	11.2 G	Water	X	N	MM-1 (DUP (Sample Duplicable))	
AX19893	8/23/17	12:38	12.7 G	Water	X	N	FB-1 (Field Blank)	
AX19896	8/23/17	13:27	15.8 G	Water	X	N	MM-11	
AX19897	8/23/17	14:50	16.3 G	Water	X	N	MM-12	
AX19898	8/23/17	16:18	18.6 G	Water	X	N	MM-10	
AX19899	8/23/17	16:53	18.3 G	Water	X	N	EB-1 (Equipment Blank)	
AX19900	8/23/17	18:48	11.3 G	Water	X	N	MM-1	
AX19902	8/23/17	09:00	12.1 G	Water	X	N	MM-2	
AX19904	8/23/17	10:15	13.8 G	Water	X	N	MM-3	
AX19905	8/23/17	12:32	14.6 G	Water	X	N	MM-4	
<p>Possible Hazard Identification</p> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological								
<p>Deliverable Requested: I, II, III, IV, Other (specify)</p>								
<p>Empty Kit Requisitioned by:</p>								
<p>Requisitioned by: Keith Konegny</p>								
<p>Date/Time: 08/29/2017 1200</p>								
<p>Method of Shipment:</p>								
<p>Received by: [Signature]</p>								
<p>Date/Time: 8/24/17 0940</p>								
<p>Company: TA</p>								
<p>Received by:</p>								
<p>Date/Time:</p>								
<p>Company:</p>								
<p>Received by:</p>								
<p>Date/Time:</p>								
<p>Company:</p>								
<p>Custody Seals Intact: TO</p>								
<p>Δ Yes Δ No</p>								



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-142502-1
SDG Number: Plant Gorgas CCB Landfills

Login Number: 142502

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.8°C IR-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?	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: 400-142502-1
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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

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

 Alabama Power



Sample Group : WMWGORLF_1118

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1118

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 anions were outsourced to Test America, Pensacola for analysis. Listed below is the case narrative provided by Test America:

**Job Narrative
400-144729-1
General Chemistry**

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373975 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 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24134 MW-8 (400-144729-7) and AX24170 MW-8 (400-144729-27). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 Cl- E: The CCV (35.7416) and CCB (0.4128) closing the bracket on the following samples: AX24164 MW-16 (400-144729-21), AX24165 MW-20 (400-144729-22), AX24166 MW-6 (400-144729-23), AX24167 FB-2 (400-144729-24), AX24168 MW-7 (400-144729-25), AX24169 MW-7 DUP (400-144729-26), AX24170 MW-8 (400-144729-27), AX24171 MW-18 (400-144729-28), AX24172 MW-5 (400-144729-29) and AX24173 MW-19 (400-144729-30) did not transfer to TALS properly, but is reflected on the raw data sheet attached to batch 372717.

Method(s) SM 4500 Cl- E: The method blank for analytical batch 372717 contained Chloride. This target analyte concentration was less than the method detection limit (MDL) and reporting limit (RL); therefore, re-analysis of samples was not performed.

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 372717 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.

Method(s) SM 4500 SO4 E: The method blank for analytical batch 372359 contained Sulfate below the method detection limit and at concentration less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24128 MW-13 (400-144729-1), AX24129 MW-14 (400-144729-2), AX24130 MW-15 (400-144729-3), AX24130 MW-15 (400-144729-3[MS]), AX24130 MW-15 (400-144729-3[MSD]), AX24131 MW-16 (400-144729-4), AX24132 MW-16 DUP (400-144729-5), AX24133 MW-19 (400-144729-6), AX24134 MW-8 (400-144729-7), AX24135 MW-20 (400-144729-8), AX24136 MW-7 (400-144729-9), AX24139 MW-6 (400-144729-12), AX24139 MW-6 (400-144729-12[MS]), AX24139 MW-6 (400-144729-12[MSD]), AX24140 MW-5 (400-144729-13), AX24141 MW-18 (400-144729-14), AX24142 MW-6 DUP (400-144729-15), AX24143 FB-1 (400-144729-16), AX24160 MW-13 (400-144729-17), AX24161 MW-14 (400-144729-18), AX24162 MW-15 (400-144729-19), AX24162 MW-15 (400-144729-19[MS]), AX24162 MW-15 (400-144729-19[MSD]), AX24163 MW-15 DUP (400-144729-20), AX24164 MW-16 (400-144729-21), AX24165 MW-20 (400-144729-22), AX24166 MW-6 (400-144729-23), AX24167 FB-2 (400-144729-24), AX24168 MW-7 (400-144729-25), AX24169 MW-7 DUP (400-144729-26), AX24170 MW-8 (400-144729-27), AX24171 MW-18 (400-144729-28), AX24172 MW-5 (400-144729-29), AX24173 MW-19 (400-144729-30), AX24173 MW-19 (400-144729-30[MS]) and AX24173 MW-19 (400-144729-30[MSD]). AX24174 FB-1 (400-144729-31) and AX24175 EB-1 (400-144729-32). 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 372654 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.



Metals ICP

Gorgas Landfill

WMWGORLF_1118

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>
AX24128	20171017AK	WMWGORLF_1118
AX24129	20171017AK	WMWGORLF_1118
AX24130	20171017AK	WMWGORLF_1118
AX24131	20171017AK	WMWGORLF_1118
AX24132	20171017AK	WMWGORLF_1118
AX24133	20171017AK	WMWGORLF_1118
AX24134	20171017AK	WMWGORLF_1118
AX24135	20171017AK	WMWGORLF_1118
AX24136	20171017AK	WMWGORLF_1118
AX24137	20171017AK	WMWGORLF_1118
AX24138	20171017BK	WMWGORLF_1118
AX24139	20171017BK	WMWGORLF_1118
AX24140	20171017BK	WMWGORLF_1118
AX24141	20171017BK	WMWGORLF_1118
AX24142	20171017BK	WMWGORLF_1118
AX24143	20171017BK	WMWGORLF_1118

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

General Quality Control Procedures:

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



- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- An additional Rinse was added between samples for monitoring Lithium due to possible matrix issues.
- 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 dilution due to possible matrix effects. The following samples were further 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>
AX24128	Calcium	x10
AX24129	Calcium	x10
AX24130	Calcium	x10
AX24131	Calcium	x10
AX24132	Calcium	x10
AX24133	Calcium	x100
AX24134	Calcium	x10
AX24135	Calcium	x10
AX24136	Calcium	x10
AX24139	Calcium	x100
AX24140	Calcium	x10
AX24141	Calcium	x10
AX24142	Calcium	x10

Alabama Power General Test Laboratory
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Calera, AL 35040
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Case Narrative

 Alabama Power



8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1118

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>
AX24128	604478	WMWGORLF_1118
AX24129	604478	WMWGORLF_1118
AX24130	604478	WMWGORLF_1118
AX24131	604478	WMWGORLF_1118
AX24132	604478	WMWGORLF_1118
AX24133	604478	WMWGORLF_1118
AX24134	604478	WMWGORLF_1118
AX24135	604478	WMWGORLF_1118
AX24136	604478	WMWGORLF_1118
AX24137	604478	WMWGORLF_1118
AX24138	604479	WMWGORLF_1118
AX24139	604479	WMWGORLF_1118
AX24140	604479	WMWGORLF_1118
AX24141	604479	WMWGORLF_1118
AX24142	604479	WMWGORLF_1118
AX24143	604479	WMWGORLF_1118

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_1118

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>
AX24128	604487	WMWGORLF_1118
AX24129	604487	WMWGORLF_1118
AX24130	604487	WMWGORLF_1118
AX24131	604487	WMWGORLF_1118
AX24132	604487	WMWGORLF_1118
AX24133	604487	WMWGORLF_1118
AX24134	604487	WMWGORLF_1118
AX24135	604487	WMWGORLF_1118
AX24136	604487	WMWGORLF_1118
AX24137	604487	WMWGORLF_1118
AX24138	604488	WMWGORLF_1118
AX24139	604488	WMWGORLF_1118
AX24140	604488	WMWGORLF_1118
AX24141	604488	WMWGORLF_1118
AX24142	604488	WMWGORLF_1118
AX24143	604488	WMWGORLF_1118

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_1118

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>
AX24128	604739	WMWGORLF_1118
AX24129	604739	WMWGORLF_1118
AX24130	604739	WMWGORLF_1118
AX24131	604739	WMWGORLF_1118
AX24132	604739	WMWGORLF_1118
AX24133	604739	WMWGORLF_1118
AX24134	604739	WMWGORLF_1118
AX24135	604739	WMWGORLF_1118
AX24136	604739	WMWGORLF_1118
AX24137	604739	WMWGORLF_1118
AX24138	604740	WMWGORLF_1118
AX24139	604740	WMWGORLF_1118
AX24140	604740	WMWGORLF_1118
AX24141	604740	WMWGORLF_1118
AX24142	604740	WMWGORLF_1118
AX24143	604740	WMWGORLF_1118

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 0.5 mg 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 AX24137, AX24138, and AX24143 which did not meet the 2.5mg residue requirement.

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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24128

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	J 0.00110	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0147	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	J 0.0673	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10		1.0	5.0	321	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0183	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	J 0.0211	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1			250	3350	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1		0.60	2.00	2.3	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1		0.032	0.10	0.22	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	70		98.0	350	2100	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24128

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit	
			MB	Limit					Limit	Rec	Limit	Prec			
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130		2.03	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130		1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130		0.795	20
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130		2.28	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130		2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130		0.0742	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130		0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130		1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	70 to 130		0.815	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130		1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130		1.04	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130		1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130		2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130		0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130		1.84	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24128

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	5

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CC:

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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24129

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	J	0.00149	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0131	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2			0.02	0.1	J	0.0493	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10			1.0	5.0		315	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0108	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2			0.010	0.05	J	0.0338	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1				250		3170	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1			0.60	2.00		2.2	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1			0.032	0.10		0.26	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	70			98.0	350		1900	mg/L

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Laboratory certification ID: E571114

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Comments: Test America, Pensacola NELAP ID: E81010

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24129

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130	2.28	20
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130	2.03	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130	2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130	0.0742	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130	1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130	1.04	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130	1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130	0.795	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130	0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130	1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	70 to 130	0.815	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130	1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130	2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130	0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130	1.84	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24129

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24130

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0117	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	J 0.0540	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10		1.0	5.0	256	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0687	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	0.0618	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1			250	2660	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.8	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1		0.032	0.10	0.37	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	70		98.0	350	1600	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24130

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit	
			MB	Limit					Limit	Rec	Limit	Prec			
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130		2.03	20
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130		2.28	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130		1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130		0.795	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130		1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130		2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130		0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130		1.84	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130		0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130		1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	70 to 130		0.815	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130		2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130		0.0742	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130		1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130		1.04	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24130

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	5

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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



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24131

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	J	0.00454	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0134	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2			0.02	0.1	J	0.0500	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10			1.0	5.0		320	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	J	0.00923	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2			0.010	0.05	J	0.0174	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1				125		2380	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1			0.60	2.00		4.4	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1			0.032	0.10		0.18	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	60			84.0	300		1300	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24131

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130	2.28	20
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130	2.03	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130	2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130	0.0742	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130	1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130	1.04	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130	1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130	0.795	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130	1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130	2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130	0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130	1.84	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130	0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130	1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	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, 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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24131

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-16 DUP

Laboratory ID Number: AX24132

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	J 0.00454	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0133	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	J 0.0497	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10		1.0	5.0	298	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	J 0.00936	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	J 0.0172	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1			125	2330	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1		0.60	2.00	4.5	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1		0.032	0.10	0.18	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	60		84.0	300	1300	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-16 DUP

Laboratory ID Number: AX24132

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130	2.28	20
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130	2.03	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130	1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130	0.795	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130	2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130	0.0742	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130	1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130	1.04	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130	1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130	2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130	0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130	1.84	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130	0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130	1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	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

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-16 DUP

Laboratory ID Number: AX24132

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24133

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	0.0106	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7		2	0.02	0.1	J 0.0390	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		100	10	50	373	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	0.173	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7		2	0.010	0.05	0.0863	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C		1		250	3720	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E		1	0.60	2.00	2.9	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C		1	0.032	0.10	0.34	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E		70	98.0	350	2300	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24133

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit	
			MB	Limit					Limit	Rec	Limit	Prec			
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130		2.03	20
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130		2.28	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130		1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130		1.04	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130		0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130		1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	70 to 130		0.815	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130		1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130		2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130		0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130		1.84	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130		2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130		0.0742	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130		1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130		0.795	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments: 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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24133

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24134

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	J 0.00197	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0141	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	J 0.0687	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10		1.0	5.0	300	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	J 0.00500	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	0.182	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1			250	2530	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	10		6.00	20	150	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1		0.032	0.10	0.22	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	50		70.0	250	1400	mg/L

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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: WMWGORLF
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24134

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit	
			MB	Limit					Limit	Rec	Limit	Prec			
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130		2.03	20
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130		2.28	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130		1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130		0.795	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130		1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130		1.04	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130		0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130		1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	70 to 130		0.815	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130		1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130		2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130		0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130		1.84	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130		2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130		0.0742	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24134

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24135

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01		0.0162	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7			2	0.02	0.1		0.105	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7			10	1.0	5.0		353	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7			2	0.010	0.05		0.259	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/18/2017	SM 2540C			1		250		2670	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E			1	0.60	2.00		5.6	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C			1	0.032	0.10		0.12	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E			50	70.0	250		1600	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24135

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130	2.03	20
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130	2.28	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130	0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130	1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	70 to 130	0.815	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130	1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130	1.04	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130	1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130	2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130	0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130	1.84	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130	1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130	0.795	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130	2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130	0.0742	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24135

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	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, 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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24136

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	J	0.00188	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0140	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2			0.02	0.1	J	0.0685	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10			1.0	5.0		317	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	J	0.00269	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2			0.010	0.05		0.134	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1				250		2460	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1			0.60	2.00		31	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1			0.032	0.10		0.17	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	50			70.0	250		1400	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24136

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit	
			MB	Limit					Limit	Rec	Limit	Prec			
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130		2.03	20
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130		2.28	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130		1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130		0.795	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130		2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130		0.0742	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130		1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130		1.04	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130		1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130		2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130		0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130		1.84	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130		0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130		1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	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, 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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24136

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24137

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	1		1.40	5.00	J 4.5	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24137

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24137	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130	2.03	20
AX24137	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.118	0.121	0.107	0.085 to 0.115		118	70 to 130	2.28	20
AX24137	Boron, Total	mg/L	0.00151	0.044	1.00	0.950	0.967	0.960	0.85 to 1.15		95.0	70 to 130	1.80	20
AX24137	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.111	0.110	0.103	0.085 to 0.115		111	70 to 130	0.795	20
AX24137	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.109	0.108	0.103	0.085 to 0.115		109	70 to 130	0.835	20
AX24137	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.101	0.0992	0.0981	0.085 to 0.115		101	70 to 130	1.72	20
AX24137	Mercury, Total by CVAA	mg/L	-0.000000546	0.0005	0.004	0.00371	0.00368	0.00381	0.0034 to 0.0046		92.7	70 to 130	0.815	20
AX24137	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0982	0.0968	0.0977	0.085 to 0.115		98.2	70 to 130	1.43	20
AX24137	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.105	0.102	0.101	0.085 to 0.115		105	70 to 130	2.99	20
AX24137	Lithium, Total	mg/L	-0.0000756	0.022	0.20	0.188	0.190	0.191	0.17 to 0.23		94.2	70 to 130	0.571	20
AX24137	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.0991	0.0973	0.0936	0.085 to 0.115		99.1	70 to 130	1.84	20
AX24137	Calcium, Total	mg/L	0.00403	0.22	5.00	4.85	4.92	4.90	4.25 to 5.75		97.0	70 to 130	1.48	20
AX24137	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.112	0.111	0.103	0.085 to 0.115		112	70 to 130	1.04	20
AX24137	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.111	0.108	0.0998	0.085 to 0.115		111	70 to 130	2.54	20
AX24137	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.105	0.105	0.103	0.085 to 0.115		105	70 to 130	0.0742	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24137

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24136	Solids, Dissolved	mg/L	2.00	25			2450	56.0	40 to 60	0.204	5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24138

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	1		1.40	5.00	J 2.3	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: WMWGORLFEB
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24138

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit	
			MB	Limit					Limit	Rec	Limit	Prec		
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115		102	70 to 130	1.28	20
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115		104	70 to 130	0.0853	20
AX24143	Calcium, Total	mg/L	0.000427	0.22	5.00	4.83	4.84	4.89	4.25 to 5.75		96.5	70 to 130	0.229	20
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115		102	70 to 130	0.740	20
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115		110	70 to 130	2.56	20
AX24143	Mercury, Total by CVAA	mg/L	-0.00000354	0.0005	0.004	0.00375	0.00374	0.00372	0.0034 to 0.0046		93.7	70 to 130	0.150	20
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115		99.6	70 to 130	1.62	20
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115		111	70 to 130	0.704	20
AX24143	Boron, Total	mg/L	0.000430	0.044	1.00	0.931	0.931	0.981	0.85 to 1.15		93.1	70 to 130	0.0835	20
AX24143	Lithium, Total	mg/L	-0.000134	0.022	0.20	0.181	0.186	0.189	0.17 to 0.23		90.7	70 to 130	2.75	20
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115		107	70 to 130	1.64	20
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115		111	70 to 130	0.484	20
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130	1.51	20
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115		102	70 to 130	3.96	20
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115		113	70 to 130	1.50	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: WMWGORLFEB
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24138

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24160	Solids, Dissolved	mg/L	2.00	25			3310	56.0	40 to 60	0.451	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, 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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24139

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8		5	0.0010	0.005	0.00510	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	0.0134	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7		2	0.02	0.1	J 0.0806	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		100	10	50	421	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	0.0279	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7		2	0.010	0.05	0.249	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C		1		250	3220	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E		1	0.60	2.00	3.4	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C		1	0.032	0.10	0.15	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E		70	98.0	350	2000	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24139

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24143	Calcium, Total	mg/L	0.000427	0.22	5.00	4.83	4.84	4.89	4.25 to 5.75	96.5	70 to 130	0.229	20	
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115	104	70 to 130	0.0853	20	
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115	102	70 to 130	0.740	20	
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115	110	70 to 130	2.56	20	
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115	102	70 to 130	1.28	20	
AX24143	Mercury, Total by CVAA	mg/L	-0.00000354	0.0005	0.004	0.00375	0.00374	0.00372	0.0034 to 0.0046	93.7	70 to 130	0.150	20	
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115	99.6	70 to 130	1.62	20	
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115	111	70 to 130	0.704	20	
AX24143	Boron, Total	mg/L	0.000430	0.044	1.00	0.931	0.931	0.981	0.85 to 1.15	93.1	70 to 130	0.0835	20	
AX24143	Lithium, Total	mg/L	-0.000134	0.022	0.20	0.181	0.186	0.189	0.17 to 0.23	90.7	70 to 130	2.75	20	
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115	107	70 to 130	1.64	20	
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115	111	70 to 130	0.484	20	
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.51	20	
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115	102	70 to 130	3.96	20	
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.50	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24139

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24160	Solids, Dissolved	mg/L	2.00	25			3310	56.0	40 to 60	0.451	5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24140

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01		0.0122	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7			2	0.02	0.1	J	0.0285	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7			10	1.0	5.0		394	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7			2	0.010	0.05		0.0930	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/18/2017	SM 2540C			1		250		4000	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E			1	0.60	2.00		7.9	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C			1	0.032	0.10		0.35	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E			70	98.0	350		2300	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24140

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB	Rec		Prec	Limit	
			MB	Limit					Rec	Limit			
AX24143	Calcium, Total	mg/L	0.000427	0.22	5.00	4.83	4.84	4.89	4.25 to 5.75	96.5	70 to 130	0.229	20
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115	102	70 to 130	1.28	20
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115	104	70 to 130	0.0853	20
AX24143	Mercury, Total by CVAA	mg/L	-0.00000354	0.0005	0.004	0.00375	0.00374	0.00372	0.0034 to 0.0046	93.7	70 to 130	0.150	20
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115	99.6	70 to 130	1.62	20
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115	111	70 to 130	0.704	20
AX24143	Boron, Total	mg/L	0.000430	0.044	1.00	0.931	0.931	0.981	0.85 to 1.15	93.1	70 to 130	0.0835	20
AX24143	Lithium, Total	mg/L	-0.000134	0.022	0.20	0.181	0.186	0.189	0.17 to 0.23	90.7	70 to 130	2.75	20
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115	107	70 to 130	1.64	20
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115	111	70 to 130	0.484	20
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.51	20
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115	102	70 to 130	3.96	20
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.50	20
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115	102	70 to 130	0.740	20
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115	110	70 to 130	2.56	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24140

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24160	Solids, Dissolved	mg/L	2.00	25			3310	56.0	40 to 60	0.451	5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24141

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0102	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	J 0.0351	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10		1.0	5.0	340	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	0.0601	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	J 0.00268	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1			250	3290	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.8	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1		0.032	0.10	0.31	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	70		98.0	350	2000	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24141

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115	104	70 to 130	0.0853	20	
AX24143	Calcium, Total	mg/L	0.000427	0.22	5.00	4.83	4.84	4.89	4.25 to 5.75	96.5	70 to 130	0.229	20	
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115	102	70 to 130	1.28	20	
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115	102	70 to 130	0.740	20	
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115	110	70 to 130	2.56	20	
AX24143	Boron, Total	mg/L	0.000430	0.044	1.00	0.931	0.931	0.981	0.85 to 1.15	93.1	70 to 130	0.0835	20	
AX24143	Lithium, Total	mg/L	-0.000134	0.022	0.20	0.181	0.186	0.189	0.17 to 0.23	90.7	70 to 130	2.75	20	
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115	107	70 to 130	1.64	20	
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115	111	70 to 130	0.484	20	
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.51	20	
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115	102	70 to 130	3.96	20	
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.50	20	
AX24143	Mercury, Total by CVAA	mg/L	-0.00000354	0.0005	0.004	0.00375	0.00374	0.00372	0.0034 to 0.0046	93.7	70 to 130	0.150	20	
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115	99.6	70 to 130	1.62	20	
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115	111	70 to 130	0.704	20	

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Comments: Test America, Pensacola NELAP ID: E81010

Alabama Power General Test Laboratory
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 Calera, AL 35040
 (205) 664-6032 or 6171
 FAX (205) 257-1654

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24141

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24160	Solids, Dissolved	mg/L	2.00	25			3310	56.0	40 to 60		0.451 5

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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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-6DUP

Laboratory ID Number: AX24142

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005		0.00522	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01		0.0139	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7			2	0.02	0.1	J	0.0786	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7			10	1.0	5.0		397	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01		0.0285	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7			2	0.010	0.05		0.245	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/18/2017	SM 2540C			1		250		3270	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E			1	0.60	2.00		3.0	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C			1	0.032	0.10		0.14	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E			70	98.0	350		1900	mg/L

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 Calera, AL 35040
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 FAX (205) 257-1654

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-6DUP

Laboratory ID Number: AX24142

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115	102	70 to 130	1.28	20	
AX24143	Calcium, Total	mg/L	0.000427	0.22	5.00	4.83	4.84	4.89	4.25 to 5.75	96.5	70 to 130	0.229	20	
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115	104	70 to 130	0.0853	20	
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115	102	70 to 130	0.740	20	
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115	110	70 to 130	2.56	20	
AX24143	Mercury, Total by CVAA	mg/L	-0.00000354	0.0005	0.004	0.00375	0.00374	0.00372	0.0034 to 0.0046	93.7	70 to 130	0.150	20	
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115	99.6	70 to 130	1.62	20	
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115	111	70 to 130	0.704	20	
AX24143	Boron, Total	mg/L	0.000430	0.044	1.00	0.931	0.931	0.981	0.85 to 1.15	93.1	70 to 130	0.0835	20	
AX24143	Lithium, Total	mg/L	-0.000134	0.022	0.20	0.181	0.186	0.189	0.17 to 0.23	90.7	70 to 130	2.75	20	
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115	107	70 to 130	1.64	20	
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115	111	70 to 130	0.484	20	
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.51	20	
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115	102	70 to 130	3.96	20	
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.50	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: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-6DUP

Laboratory ID Number: AX24142

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24160	Solids, Dissolved	mg/L	2.00	25			3310	56.0	40 to 60		0.451 5

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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: WMWGORLFFB
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24143

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	11/22/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	11/22/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	11/22/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	mg/L

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24143

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115	104	70 to 130	0.0853	20	
AX24143	Calcium, Total	mg/L	0.000427	0.22	5.00	4.83	4.84	4.89	4.25 to 5.75	96.5	70 to 130	0.229	20	
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115	102	70 to 130	1.28	20	
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115	102	70 to 130	0.740	20	
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115	110	70 to 130	2.56	20	
AX24143	Mercury, Total by CVAA	mg/L	-0.00000354	0.0005	0.004	0.00375	0.00374	0.00372	0.0034 to 0.0046	93.7	70 to 130	0.150	20	
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115	99.6	70 to 130	1.62	20	
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115	111	70 to 130	0.704	20	
AX24143	Boron, Total	mg/L	0.000430	0.044	1.00	0.931	0.931	0.981	0.85 to 1.15	93.1	70 to 130	0.0835	20	
AX24143	Lithium, Total	mg/L	-0.000134	0.022	0.20	0.181	0.186	0.189	0.17 to 0.23	90.7	70 to 130	2.75	20	
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115	107	70 to 130	1.64	20	
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115	111	70 to 130	0.484	20	
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.51	20	
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115	102	70 to 130	3.96	20	
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.50	20	

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 12-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24143

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24160	Solids, Dissolved	mg/L	2.00	25			3310	56.0	40 to 60	0.451	5

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CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 10/13/2017 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): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions"/>
Comments	<input type="text" value="All anions outsourced to Test America, Pensacola"/>

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-20	10/12/2017	14:58	4	Groundwater		AX24135
MW-7	10/12/2017	15:57	4	Groundwater		AX24136
FB-2	10/12/2017	16:18	4	Field Blank		AX24137
EB-1	10/12/2017	16:45	4	Equipment Blank		AX24138

Relinquished By	Received By	Date/Time
		10/12/2017 17:06
Benjamin Rothschadl <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=XZ8TROTH@southernco.com, c=US Date: 2017.10.13 15:58:42 -0500</small>	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegas@southernco.com, c=US Date: 2017.10.13 18:21:37 -0500</small>	10/13/2017 18:21

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="4677-23342-4-1"/>	Cooler Temp
		<input type="text" value="0.8 degrees C"/>
		Thermometer ID
		<input type="text" value="6035-30997-2-2"/>
		pH Strip ID
		<input type="text" value="6153-32042-10-9"/>



Chain of Custody

Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 16:00

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 (500mL): TDS, Bottle 4 (250mL): Anions		
Comments	All anions outsourced to Test America, Pensacola		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-6	10/12/2017	12:42	4	Groundwater		AX24139
MW-5	10/12/2017	16:16	4	Groundwater		AX24140
MW-18	10/12/2017	17:37	4	Groundwater		AX24141
MW-6DUP	10/12/2017	12:42	4	Sample Duplicate		AX24142
FB-1	10/12/2017	15:19	4	Field Blank		AX24143

Relinquished By	Received By	Date/Time
		10/13/2017 13:48
Benjamin Rothschadl Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=k28TROTH@southemco.com, c=US Date: 2017.10.13 16:00:35 -0500	Keith Kornegay Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornega@southemco.com, c=US Date: 2017.10.13 18:14:54 -0500	10/13/2017 18:15

SmarTroll ID	5141-26150-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20009-2-1	Cooler Temp
		0.8 degrees C
		Thermometer ID
		6035-30997-2-2
		pH Strip ID
		6153-32042-10-9



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 17:30

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="Ben Rothschild"/>	Location	<input type="text" value="Gorgas Landfill"/>

Analysis Requested	<input type="text" value="Bottle 1 (500mL): Metals, Bottle 2 (250mL): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions"/>
Comments	<input type="text" value="All anions outsourced to Test America, Pensacola"/>

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/12/2017	09:35	4	Groundwater		AX24128
MW-14	10/12/2017	10:45	4	Groundwater		AX24129
MW-15	10/12/2017	12:00	4	Groundwater		AX24130
MW-16	10/12/2017	13:09	4	Groundwater		AX24131
MW-16 DUP	10/12/2017	13:09	4	Sample Duplicate		AX24132
MW-19	10/12/2017	14:30	4	Groundwater		AX24133
MW-8	10/12/2017	16:19	4	Groundwater		AX24134

Relinquished By <div style="text-align: center; font-family: cursive; font-size: 1.5em; color: black;"> </div>	Received By <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Keith Kornegay</div> <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southemco.com, c=US Date: 2017.10.13 18:10:29 -0500</small>	Date/Time <input type="text" value="10/13/2017 18:10"/>

SmarTroll ID <input type="text" value="5151-26193-1-1"/>	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID <input type="text" value="3901-20010-2-2"/>	Cooler Temp <input type="text" value="0.8 degrees C"/>
	Thermometer ID <input type="text" value="6035-30997-2-2"/>
	pH Strip ID <input type="text" value="6153-32042-10-9"/>

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: 400-144729-1

TestAmerica SDG: Plant Gorgas CCB Landfills

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:

10/31/2017 5:17:46 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144729-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144729-1

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373975 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 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24134 MW-8 (400-144729-7) and AX24170 MW-8 (400-144729-27). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 Cl- E: The CCV (35.7416) and CCB (0.4128) closing the bracket on the following samples: AX24164 MW-16 (400-144729-21), AX24165 MW-20 (400-144729-22), AX24166 MW-6 (400-144729-23), AX24167 FB-2 (400-144729-24), AX24168 MW-7 (400-144729-25), AX24169 MW-7 DUP (400-144729-26), AX24170 MW-8 (400-144729-27), AX24171 MW-18 (400-144729-28), AX24172 MW-5 (400-144729-29) and AX24173 MW-19 (400-144729-30) did not transfer to TALS properly, but is reflected on the raw data sheet attached to batch 372717.

Method(s) SM 4500 Cl- E: The method blank for analytical batch 372717 contained Chloride. This target analyte concentration was less than the method detection limit (MDL) and reporting limit (RL); therefore, re-analysis of samples was not performed.

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 372717 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.

Method(s) SM 4500 SO4 E: The method blank for analytical batch 372359 contained Sulfate below the method detection limit and at concentration less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24128 MW-13 (400-144729-1), AX24129 MW-14 (400-144729-2), AX24130 MW-15 (400-144729-3), AX24130 MW-15 (400-144729-3[MS]), AX24130 MW-15 (400-144729-3[MSD]), AX24131 MW-16 (400-144729-4), AX24132 MW-16 DUP (400-144729-5), AX24133 MW-19 (400-144729-6), AX24134 MW-8 (400-144729-7), AX24135 MW-20 (400-144729-8), AX24136 MW-7 (400-144729-9), AX24139 MW-6 (400-144729-12), AX24139 MW-6 (400-144729-12[MS]), AX24139 MW-6 (400-144729-12[MSD]), AX24140 MW-5 (400-144729-13), AX24141 MW-18 (400-144729-14), AX24142 MW-6 DUP (400-144729-15), AX24143 FB-1 (400-144729-16), AX24160 MW-13 (400-144729-17), AX24161 MW-14 (400-144729-18), AX24162 MW-15 (400-144729-19), AX24162 MW-15 (400-144729-19[MS]), AX24162 MW-15 (400-144729-19[MSD]), AX24163 MW-15 DUP (400-144729-20), AX24164 MW-16 (400-144729-21), AX24165 MW-20 (400-144729-22), AX24166 MW-6 (400-144729-23), AX24167 FB-2 (400-144729-24), AX24168 MW-7 (400-144729-25), AX24169 MW-7 DUP (400-144729-26), AX24170 MW-8 (400-144729-27), AX24171 MW-18 (400-144729-28), AX24172 MW-5 (400-144729-29), AX24173 MW-19 (400-144729-30), AX24173 MW-19 (400-144729-30[MS]) and AX24173 MW-19 (400-144729-30[MSD]). AX24174 FB-1 (400-144729-31) and AX24175 EB-1 (400-144729-32). 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 372654 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.

Detection Summary

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24128 MW-13

Lab Sample ID: 400-144729-1

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	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2100		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24129 MW-14

Lab Sample ID: 400-144729-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.2		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	1900		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24130 MW-15

Lab Sample ID: 400-144729-3

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
Fluoride	0.37		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1600		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24131 MW-16

Lab Sample ID: 400-144729-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24132 MW-16 DUP

Lab Sample ID: 400-144729-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.5		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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24133 MW-19

Lab Sample ID: 400-144729-6

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	0.34		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24134 MW-8

Lab Sample ID: 400-144729-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	150		20	6.0	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24135 MW-20

Lab Sample ID: 400-144729-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.6		2.0	0.60	mg/L	1		SM 4500 Cl- 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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24135 MW-20 (Continued)

Lab Sample ID: 400-144729-8

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
Sulfate	1600		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24136 MW-7

Lab Sample ID: 400-144729-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	31		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	1400		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24137 FB-2

Lab Sample ID: 400-144729-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	4.5	J B	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24138 EB-1

Lab Sample ID: 400-144729-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2.3	J B	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24139 MW-6

Lab Sample ID: 400-144729-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		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	2000		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24140 MW-5

Lab Sample ID: 400-144729-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.9		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	2300		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24141 MW-18

Lab Sample ID: 400-144729-14

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
Fluoride	0.31		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2000		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24142 MW-6 DUP

Lab Sample ID: 400-144729-15

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	0.14		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1900		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24143 FB-1

Lab Sample ID: 400-144729-16

No Detections.

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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24160 MW-13

Lab Sample ID: 400-144729-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		2.0	0.60	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	2000		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24161 MW-14

Lab Sample ID: 400-144729-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24162 MW-15

Lab Sample ID: 400-144729-19

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
Fluoride	0.36		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1600	F1 F2	350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24163 MW-15 DUP

Lab Sample ID: 400-144729-20

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	0.36		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1500		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24164 MW-16

Lab Sample ID: 400-144729-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.3	B	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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24165 MW-20

Lab Sample ID: 400-144729-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.0	B	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	1600		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24166 MW-6

Lab Sample ID: 400-144729-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.0	B	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	2000		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24167 FB-2

Lab Sample ID: 400-144729-24

No Detections.

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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24168 MW-7

Lab Sample ID: 400-144729-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32	B	2.0	0.60	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	1400		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24169 MW-7 DUP

Lab Sample ID: 400-144729-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32	B	2.0	0.60	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	1400		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24170 MW-8

Lab Sample ID: 400-144729-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	130	B	10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.23		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1600		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24171 MW-18

Lab Sample ID: 400-144729-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3	B	2.0	0.60	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	1900		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24172 MW-5

Lab Sample ID: 400-144729-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.0	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.36		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24173 MW-19

Lab Sample ID: 400-144729-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.6	B F2	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.34		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2200		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24174 FB-1

Lab Sample ID: 400-144729-31

No Detections.

Client Sample ID: AX24175 EB-1

Lab Sample ID: 400-144729-32

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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

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



Sample Summary

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144729-1	AX24128 MW-13	Water	10/12/17 09:35	10/17/17 10:20
400-144729-2	AX24129 MW-14	Water	10/12/17 10:45	10/17/17 10:20
400-144729-3	AX24130 MW-15	Water	10/12/17 12:00	10/17/17 10:20
400-144729-4	AX24131 MW-16	Water	10/12/17 13:09	10/17/17 10:20
400-144729-5	AX24132 MW-16 DUP	Water	10/12/17 13:09	10/17/17 10:20
400-144729-6	AX24133 MW-19	Water	10/12/17 14:30	10/17/17 10:20
400-144729-7	AX24134 MW-8	Water	10/12/17 16:19	10/17/17 10:20
400-144729-8	AX24135 MW-20	Water	10/12/17 14:58	10/17/17 10:20
400-144729-9	AX24136 MW-7	Water	10/12/17 15:57	10/17/17 10:20
400-144729-10	AX24137 FB-2	Water	10/12/17 16:18	10/17/17 10:20
400-144729-11	AX24138 EB-1	Water	10/12/17 16:45	10/17/17 10:20
400-144729-12	AX24139 MW-6	Water	10/12/17 12:42	10/17/17 10:20
400-144729-13	AX24140 MW-5	Water	10/12/17 16:16	10/17/17 10:20
400-144729-14	AX24141 MW-18	Water	10/12/17 17:37	10/17/17 10:20
400-144729-15	AX24142 MW-6 DUP	Water	10/12/17 12:42	10/17/17 10:20
400-144729-16	AX24143 FB-1	Water	10/12/17 15:19	10/17/17 10:20
400-144729-17	AX24160 MW-13	Water	10/13/17 09:24	10/17/17 10:20
400-144729-18	AX24161 MW-14	Water	10/13/17 10:43	10/17/17 10:20
400-144729-19	AX24162 MW-15	Water	10/13/17 11:50	10/17/17 10:20
400-144729-20	AX24163 MW-15 DUP	Water	10/13/17 11:50	10/17/17 10:20
400-144729-21	AX24164 MW-16	Water	10/13/17 13:03	10/17/17 10:20
400-144729-22	AX24165 MW-20	Water	10/13/17 09:06	10/17/17 10:20
400-144729-23	AX24166 MW-6	Water	10/13/17 10:12	10/17/17 10:20
400-144729-24	AX24167 FB-2	Water	10/13/17 10:02	10/17/17 10:20
400-144729-25	AX24168 MW-7	Water	10/13/17 11:23	10/17/17 10:20
400-144729-26	AX24169 MW-7 DUP	Water	10/13/17 11:23	10/17/17 10:20
400-144729-27	AX24170 MW-8	Water	10/13/17 12:55	10/17/17 10:20
400-144729-28	AX24171 MW-18	Water	10/13/17 08:57	10/17/17 10:20
400-144729-29	AX24172 MW-5	Water	10/13/17 10:21	10/17/17 10:20
400-144729-30	AX24173 MW-19	Water	10/13/17 13:13	10/17/17 10:20
400-144729-31	AX24174 FB-1	Water	10/13/17 13:26	10/17/17 10:20
400-144729-32	AX24175 EB-1	Water	10/13/17 13:30	10/17/17 10:20

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24128 MW-13

Lab Sample ID: 400-144729-1

Date Collected: 10/12/17 09:35

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.22		0.10	0.032	mg/L			10/30/17 16:02	1
Sulfate	2100		350	98	mg/L			10/20/17 08:39	70

Client Sample ID: AX24129 MW-14

Lab Sample ID: 400-144729-2

Date Collected: 10/12/17 10:45

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.2		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.26		0.10	0.032	mg/L			10/30/17 16:04	1
Sulfate	1900		350	98	mg/L			10/20/17 08:39	70

Client Sample ID: AX24130 MW-15

Lab Sample ID: 400-144729-3

Date Collected: 10/12/17 12:00

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.37		0.10	0.032	mg/L			10/31/17 11:57	1
Sulfate	1600		350	98	mg/L			10/20/17 08:39	70

Client Sample ID: AX24131 MW-16

Lab Sample ID: 400-144729-4

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.18		0.10	0.032	mg/L			10/30/17 13:48	1
Sulfate	1300		300	84	mg/L			10/20/17 08:39	60

Client Sample ID: AX24132 MW-16 DUP

Lab Sample ID: 400-144729-5

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.5		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.18		0.10	0.032	mg/L			10/30/17 13:50	1
Sulfate	1300		300	84	mg/L			10/20/17 08:43	60

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24133 MW-19

Lab Sample ID: 400-144729-6

Date Collected: 10/12/17 14:30

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.9		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.34		0.10	0.032	mg/L			10/30/17 15:01	1
Sulfate	2300		350	98	mg/L			10/20/17 08:43	70

Client Sample ID: AX24134 MW-8

Lab Sample ID: 400-144729-7

Date Collected: 10/12/17 16:19

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		20	6.0	mg/L			10/20/17 14:09	10
Fluoride	0.22		0.10	0.032	mg/L			10/30/17 15:03	1
Sulfate	1400		250	70	mg/L			10/20/17 08:44	50

Client Sample ID: AX24135 MW-20

Lab Sample ID: 400-144729-8

Date Collected: 10/12/17 14:58

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.6		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.12		0.10	0.032	mg/L			10/30/17 16:09	1
Sulfate	1600		250	70	mg/L			10/20/17 08:44	50

Client Sample ID: AX24136 MW-7

Lab Sample ID: 400-144729-9

Date Collected: 10/12/17 15:57

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.17		0.10	0.032	mg/L			10/30/17 16:11	1
Sulfate	1400		250	70	mg/L			10/20/17 08:47	50

Client Sample ID: AX24137 FB-2

Lab Sample ID: 400-144729-10

Date Collected: 10/12/17 16:18

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 14:09	1
Fluoride	<0.032		0.10	0.032	mg/L			10/30/17 16:13	1
Sulfate	4.5	J B	5.0	1.4	mg/L			10/18/17 09:13	1

Client Sample ID: AX24138 EB-1

Lab Sample ID: 400-144729-11

Date Collected: 10/12/17 16:45

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 14:12	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24138 EB-1

Lab Sample ID: 400-144729-11

Date Collected: 10/12/17 16:45

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			10/30/17 16:20	1
Sulfate	2.3	J B	5.0	1.4	mg/L			10/18/17 09:13	1

Client Sample ID: AX24139 MW-6

Lab Sample ID: 400-144729-12

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.4		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.15		0.10	0.032	mg/L			10/31/17 13:08	1
Sulfate	2000		350	98	mg/L			10/20/17 08:47	70

Client Sample ID: AX24140 MW-5

Lab Sample ID: 400-144729-13

Date Collected: 10/12/17 16:16

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.9		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.35		0.10	0.032	mg/L			10/30/17 16:25	1
Sulfate	2300		350	98	mg/L			10/20/17 10:02	70

Client Sample ID: AX24141 MW-18

Lab Sample ID: 400-144729-14

Date Collected: 10/12/17 17:37

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/20/17 15:09	1
Fluoride	0.31		0.10	0.032	mg/L			10/30/17 16:27	1
Sulfate	2000		350	98	mg/L			10/20/17 10:02	70

Client Sample ID: AX24142 MW-6 DUP

Lab Sample ID: 400-144729-15

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.0		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.14		0.10	0.032	mg/L			10/30/17 16:29	1
Sulfate	1900		350	98	mg/L			10/20/17 10:34	70

Client Sample ID: AX24143 FB-1

Lab Sample ID: 400-144729-16

Date Collected: 10/12/17 15:19

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	<0.032		0.10	0.032	mg/L			10/30/17 16:32	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24143 FB-1

Lab Sample ID: 400-144729-16

Date Collected: 10/12/17 15:19

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 10:29	1

Client Sample ID: AX24160 MW-13

Lab Sample ID: 400-144729-17

Date Collected: 10/13/17 09:24

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.20		0.10	0.032	mg/L			10/30/17 16:34	1
Sulfate	2000		350	98	mg/L			10/20/17 10:34	70

Client Sample ID: AX24161 MW-14

Lab Sample ID: 400-144729-18

Date Collected: 10/13/17 10:43

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.2		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.25		0.10	0.032	mg/L			10/30/17 16:36	1
Sulfate	1800		350	98	mg/L			10/20/17 10:34	70

Client Sample ID: AX24162 MW-15

Lab Sample ID: 400-144729-19

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.36		0.10	0.032	mg/L			10/31/17 14:14	1
Sulfate	1600	F1 F2	350	98	mg/L			10/20/17 10:34	70

Client Sample ID: AX24163 MW-15 DUP

Lab Sample ID: 400-144729-20

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.36		0.10	0.032	mg/L			10/31/17 12:14	1
Sulfate	1500		350	98	mg/L			10/20/17 10:36	70

Client Sample ID: AX24164 MW-16

Lab Sample ID: 400-144729-21

Date Collected: 10/13/17 13:03

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.3	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.17		0.10	0.032	mg/L			10/30/17 16:06	1
Sulfate	1300		300	84	mg/L			10/20/17 13:15	60

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24165 MW-20

Lab Sample ID: 400-144729-22

Date Collected: 10/13/17 09:06

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.0	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.13		0.10	0.032	mg/L			10/30/17 16:38	1
Sulfate	1600		350	98	mg/L			10/20/17 13:15	70

Client Sample ID: AX24166 MW-6

Lab Sample ID: 400-144729-23

Date Collected: 10/13/17 10:12

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.0	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.15		0.10	0.032	mg/L			10/31/17 12:17	1
Sulfate	2000		350	98	mg/L			10/20/17 13:15	70

Client Sample ID: AX24167 FB-2

Lab Sample ID: 400-144729-24

Date Collected: 10/13/17 10:02

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 12:19	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 12:57	1

Client Sample ID: AX24168 MW-7

Lab Sample ID: 400-144729-25

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.19		0.10	0.032	mg/L			10/31/17 12:27	1
Sulfate	1400		350	98	mg/L			10/20/17 13:15	70

Client Sample ID: AX24169 MW-7 DUP

Lab Sample ID: 400-144729-26

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.19		0.10	0.032	mg/L			10/31/17 12:31	1
Sulfate	1400		300	84	mg/L			10/20/17 13:20	60

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24170 MW-8

Lab Sample ID: 400-144729-27

Date Collected: 10/13/17 12:55

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130	B	10	3.0	mg/L			10/20/17 16:02	5
Fluoride	0.23		0.10	0.032	mg/L			10/31/17 12:34	1
Sulfate	1600		350	98	mg/L			10/20/17 13:20	70

Client Sample ID: AX24171 MW-18

Lab Sample ID: 400-144729-28

Date Collected: 10/13/17 08:57

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.32		0.10	0.032	mg/L			10/31/17 12:36	1
Sulfate	1900		350	98	mg/L			10/20/17 13:20	70

Client Sample ID: AX24172 MW-5

Lab Sample ID: 400-144729-29

Date Collected: 10/13/17 10:21

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.0	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.36		0.10	0.032	mg/L			10/31/17 12:38	1
Sulfate	2300		350	98	mg/L			10/20/17 13:20	70

Client Sample ID: AX24173 MW-19

Lab Sample ID: 400-144729-30

Date Collected: 10/13/17 13:13

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.6	B F2	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.34		0.10	0.032	mg/L			10/31/17 14:41	1
Sulfate	2200		350	98	mg/L			10/20/17 13:22	70

Client Sample ID: AX24174 FB-1

Lab Sample ID: 400-144729-31

Date Collected: 10/13/17 13:26

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 15:52	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 12:41	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 12:57	1

Client Sample ID: AX24175 EB-1

Lab Sample ID: 400-144729-32

Date Collected: 10/13/17 13:30

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 15:52	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24175 EB-1

Lab Sample ID: 400-144729-32

Date Collected: 10/13/17 13:30

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 12:43	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 12:57	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Definitions/Glossary

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Qualifiers

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

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: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24128 MW-13

Lab Sample ID: 400-144729-1

Date Collected: 10/12/17 09:35

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:39	JLB	TAL PEN

Client Sample ID: AX24129 MW-14

Lab Sample ID: 400-144729-2

Date Collected: 10/12/17 10:45

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:04	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:39	JLB	TAL PEN

Client Sample ID: AX24130 MW-15

Lab Sample ID: 400-144729-3

Date Collected: 10/12/17 12:00

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 11:57	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:39	JLB	TAL PEN

Client Sample ID: AX24131 MW-16

Lab Sample ID: 400-144729-4

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373938	10/30/17 13:48	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	372654	10/20/17 08:39	JLB	TAL PEN

Client Sample ID: AX24132 MW-16 DUP

Lab Sample ID: 400-144729-5

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373938	10/30/17 13:50	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	372654	10/20/17 08:43	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24133 MW-19

Lab Sample ID: 400-144729-6

Date Collected: 10/12/17 14:30

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373952	10/30/17 15:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:43	JLB	TAL PEN

Client Sample ID: AX24134 MW-8

Lab Sample ID: 400-144729-7

Date Collected: 10/12/17 16:19

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		10	372713	10/20/17 14:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373952	10/30/17 15:03	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	372654	10/20/17 08:44	JLB	TAL PEN

Client Sample ID: AX24135 MW-20

Lab Sample ID: 400-144729-8

Date Collected: 10/12/17 14:58

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:09	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	372654	10/20/17 08:44	JLB	TAL PEN

Client Sample ID: AX24136 MW-7

Lab Sample ID: 400-144729-9

Date Collected: 10/12/17 15:57

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	372654	10/20/17 08:47	JLB	TAL PEN

Client Sample ID: AX24137 FB-2

Lab Sample ID: 400-144729-10

Date Collected: 10/12/17 16:18

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 14:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:13	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372359	10/18/17 09:13	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24138 EB-1

Lab Sample ID: 400-144729-11

Date Collected: 10/12/17 16:45

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 14:12	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:20	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372359	10/18/17 09:13	JLB	TAL PEN

Client Sample ID: AX24139 MW-6

Lab Sample ID: 400-144729-12

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:08	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:47	JLB	TAL PEN

Client Sample ID: AX24140 MW-5

Lab Sample ID: 400-144729-13

Date Collected: 10/12/17 16:16

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:02	JLB	TAL PEN

Client Sample ID: AX24141 MW-18

Lab Sample ID: 400-144729-14

Date Collected: 10/12/17 17:37

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:02	JLB	TAL PEN

Client Sample ID: AX24142 MW-6 DUP

Lab Sample ID: 400-144729-15

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:29	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:34	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24143 FB-1

Lab Sample ID: 400-144729-16

Date Collected: 10/12/17 15:19

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:32	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372654	10/20/17 10:29	JLB	TAL PEN

Client Sample ID: AX24160 MW-13

Lab Sample ID: 400-144729-17

Date Collected: 10/13/17 09:24

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:34	JLB	TAL PEN

Client Sample ID: AX24161 MW-14

Lab Sample ID: 400-144729-18

Date Collected: 10/13/17 10:43

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:34	JLB	TAL PEN

Client Sample ID: AX24162 MW-15

Lab Sample ID: 400-144729-19

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:34	JLB	TAL PEN

Client Sample ID: AX24163 MW-15 DUP

Lab Sample ID: 400-144729-20

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:36	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24164 MW-16

Lab Sample ID: 400-144729-21

Date Collected: 10/13/17 13:03

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	372685	10/20/17 13:15	JLB	TAL PEN

Client Sample ID: AX24165 MW-20

Lab Sample ID: 400-144729-22

Date Collected: 10/13/17 09:06

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:38	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:15	JLB	TAL PEN

Client Sample ID: AX24166 MW-6

Lab Sample ID: 400-144729-23

Date Collected: 10/13/17 10:12

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:15	JLB	TAL PEN

Client Sample ID: AX24167 FB-2

Lab Sample ID: 400-144729-24

Date Collected: 10/13/17 10:02

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:19	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 12:57	JLB	TAL PEN

Client Sample ID: AX24168 MW-7

Lab Sample ID: 400-144729-25

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:15	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24169 MW-7 DUP

Lab Sample ID: 400-144729-26

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:31	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	372685	10/20/17 13:20	JLB	TAL PEN

Client Sample ID: AX24170 MW-8

Lab Sample ID: 400-144729-27

Date Collected: 10/13/17 12:55

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		5	372717	10/20/17 16:02	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:20	JLB	TAL PEN

Client Sample ID: AX24171 MW-18

Lab Sample ID: 400-144729-28

Date Collected: 10/13/17 08:57

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:20	JLB	TAL PEN

Client Sample ID: AX24172 MW-5

Lab Sample ID: 400-144729-29

Date Collected: 10/13/17 10:21

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:38	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:20	JLB	TAL PEN

Client Sample ID: AX24173 MW-19

Lab Sample ID: 400-144729-30

Date Collected: 10/13/17 13:13

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:41	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:22	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24174 FB-1

Lab Sample ID: 400-144729-31

Date Collected: 10/13/17 13:26

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:52	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:41	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 12:57	JLB	TAL PEN

Client Sample ID: AX24175 EB-1

Lab Sample ID: 400-144729-32

Date Collected: 10/13/17 13:30

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:52	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 12:57	JLB	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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

General Chemistry

Analysis Batch: 372359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-10	AX24137 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-144729-11	AX24138 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-372359/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-372359/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-372359/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 372654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-1	AX24128 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-144729-2	AX24129 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-144729-3	AX24130 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-4	AX24131 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-144729-5	AX24132 MW-16 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144729-6	AX24133 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-144729-7	AX24134 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-144729-8	AX24135 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144729-9	AX24136 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-144729-12	AX24139 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144729-13	AX24140 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-144729-14	AX24141 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-144729-15	AX24142 MW-6 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144729-16	AX24143 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-144729-17	AX24160 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-144729-18	AX24161 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-144729-19	AX24162 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-20	AX24163 MW-15 DUP	Total/NA	Water	SM 4500 SO4 E	
MB 400-372654/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-372654/13	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-372654/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144729-3 MS	AX24130 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-3 MSD	AX24130 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-12 MS	AX24139 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144729-12 MSD	AX24139 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144729-19 MS	AX24162 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-19 MSD	AX24162 MW-15	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 372685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-21	AX24164 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-144729-22	AX24165 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144729-23	AX24166 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144729-24	AX24167 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-144729-25	AX24168 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-144729-26	AX24169 MW-7 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144729-27	AX24170 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-144729-28	AX24171 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-144729-29	AX24172 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-144729-30	AX24173 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-144729-31	AX24174 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-144729-32	AX24175 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-372685/6	Method Blank	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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 372685 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-372685/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-372685/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144729-30 MS	AX24173 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-144729-30 MSD	AX24173 MW-19	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 372713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-1	AX24128 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-144729-2	AX24129 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-144729-3	AX24130 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-4	AX24131 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-144729-5	AX24132 MW-16 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144729-6	AX24133 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144729-7	AX24134 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-144729-8	AX24135 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144729-9	AX24136 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-144729-10	AX24137 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-144729-11	AX24138 EB-1	Total/NA	Water	SM 4500 Cl- E	
400-144729-12	AX24139 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144729-13	AX24140 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-144729-14	AX24141 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-144729-15	AX24142 MW-6 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144729-16	AX24143 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-144729-17	AX24160 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-144729-18	AX24161 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-144729-19	AX24162 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-20	AX24163 MW-15 DUP	Total/NA	Water	SM 4500 Cl- E	
MB 400-372713/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-372713/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-372713/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144729-3 MS	AX24130 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-3 MSD	AX24130 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-12 MS	AX24139 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144729-12 MSD	AX24139 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144729-19 MS	AX24162 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-19 MSD	AX24162 MW-15	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 372717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-21	AX24164 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-144729-22	AX24165 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144729-23	AX24166 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144729-24	AX24167 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-144729-25	AX24168 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-144729-26	AX24169 MW-7 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144729-27	AX24170 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-144729-28	AX24171 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-144729-29	AX24172 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-144729-30	AX24173 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144729-31	AX24174 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-144729-32	AX24175 EB-1	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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 372717 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-372717/20	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-372717/21	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-372717/17	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144729-30 MS	AX24173 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144729-30 MSD	AX24173 MW-19	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 373938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-4	AX24131 MW-16	Total/NA	Water	SM 4500 F C	
400-144729-5	AX24132 MW-16 DUP	Total/NA	Water	SM 4500 F C	
MB 400-373938/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-373938/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-83271-C-13 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-83271-C-13 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
660-83312-C-9 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 373952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-6	AX24133 MW-19	Total/NA	Water	SM 4500 F C	
400-144729-7	AX24134 MW-8	Total/NA	Water	SM 4500 F C	
MB 400-373952/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-373952/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144674-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144674-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
660-83348-D-5 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 373975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-1	AX24128 MW-13	Total/NA	Water	SM 4500 F C	
400-144729-2	AX24129 MW-14	Total/NA	Water	SM 4500 F C	
400-144729-8	AX24135 MW-20	Total/NA	Water	SM 4500 F C	
400-144729-9	AX24136 MW-7	Total/NA	Water	SM 4500 F C	
400-144729-10	AX24137 FB-2	Total/NA	Water	SM 4500 F C	
400-144729-11	AX24138 EB-1	Total/NA	Water	SM 4500 F C	
400-144729-13	AX24140 MW-5	Total/NA	Water	SM 4500 F C	
400-144729-14	AX24141 MW-18	Total/NA	Water	SM 4500 F C	
400-144729-15	AX24142 MW-6 DUP	Total/NA	Water	SM 4500 F C	
400-144729-16	AX24143 FB-1	Total/NA	Water	SM 4500 F C	
400-144729-17	AX24160 MW-13	Total/NA	Water	SM 4500 F C	
400-144729-18	AX24161 MW-14	Total/NA	Water	SM 4500 F C	
400-144729-21	AX24164 MW-16	Total/NA	Water	SM 4500 F C	
400-144729-22	AX24165 MW-20	Total/NA	Water	SM 4500 F C	
MB 400-373975/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-373975/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-83348-C-3 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-83348-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-144729-11 DU	AX24138 EB-1	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-3	AX24130 MW-15	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: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 374086 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-20	AX24163 MW-15 DUP	Total/NA	Water	SM 4500 F C	
400-144729-23	AX24166 MW-6	Total/NA	Water	SM 4500 F C	
400-144729-24	AX24167 FB-2	Total/NA	Water	SM 4500 F C	
400-144729-25	AX24168 MW-7	Total/NA	Water	SM 4500 F C	
400-144729-26	AX24169 MW-7 DUP	Total/NA	Water	SM 4500 F C	
400-144729-27	AX24170 MW-8	Total/NA	Water	SM 4500 F C	
400-144729-28	AX24171 MW-18	Total/NA	Water	SM 4500 F C	
400-144729-29	AX24172 MW-5	Total/NA	Water	SM 4500 F C	
400-144729-31	AX24174 FB-1	Total/NA	Water	SM 4500 F C	
400-144729-32	AX24175 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-374086/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374086/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-3 MS	AX24130 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-3 MSD	AX24130 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-25 DU	AX24168 MW-7	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-12	AX24139 MW-6	Total/NA	Water	SM 4500 F C	
MB 400-374103/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374103/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-12 MS	AX24139 MW-6	Total/NA	Water	SM 4500 F C	
400-144729-12 MSD	AX24139 MW-6	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-19	AX24162 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-30	AX24173 MW-19	Total/NA	Water	SM 4500 F C	
MB 400-374123/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374123/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-19 MS	AX24162 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-19 MSD	AX24162 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-30 MS	AX24173 MW-19	Total/NA	Water	SM 4500 F C	
400-144729-30 MSD	AX24173 MW-19	Total/NA	Water	SM 4500 F C	

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-372713/6
Matrix: Water
Analysis Batch: 372713

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			10/20/17 13:41	1

Lab Sample ID: LCS 400-372713/7
Matrix: Water
Analysis Batch: 372713

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	30.2		mg/L		101	90 - 110

Lab Sample ID: MRL 400-372713/3
Matrix: Water
Analysis Batch: 372713

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	2.21		mg/L		110	50 - 150

Lab Sample ID: 400-144729-3 MS
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.8	J	10.0	12.5		mg/L		106	73 - 120

Lab Sample ID: 400-144729-3 MSD
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.8	J	10.0	12.6		mg/L		107	73 - 120	1	8

Lab Sample ID: 400-144729-12 MS
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24139 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.4		10.0	14.0		mg/L		106	73 - 120

Lab Sample ID: 400-144729-12 MSD
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24139 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
Chloride	3.4		10.0	13.9		mg/L		104	73 - 120	1	8

Lab Sample ID: 400-144729-19 MS
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.8	J	10.0	12.0		mg/L		102	73 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144729-19 MSD
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.8	J	10.0	12.1		mg/L		102	73 - 120	0	8

Lab Sample ID: MB 400-372717/20
Matrix: Water
Analysis Batch: 372717

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.855	J	2.0	0.60	mg/L			10/20/17 15:52	1

Lab Sample ID: LCS 400-372717/21
Matrix: Water
Analysis Batch: 372717

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	31.2		mg/L		104	90 - 110

Lab Sample ID: MRL 400-372717/17
Matrix: Water
Analysis Batch: 372717

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	2.50		mg/L		125	50 - 150

Lab Sample ID: 400-144729-30 MS
Matrix: Water
Analysis Batch: 372717

Client Sample ID: AX24173 MW-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.6	B F2	10.0	11.3		mg/L		87	73 - 120

Lab Sample ID: 400-144729-30 MSD
Matrix: Water
Analysis Batch: 372717

Client Sample ID: AX24173 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
Chloride	2.6	B F2	10.0	12.9	F2	mg/L		103	73 - 120	13	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-373938/3
Matrix: Water
Analysis Batch: 373938

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			10/30/17 13:23	1

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 400-373938/4
Matrix: Water
Analysis Batch: 373938

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	3.82		mg/L		96	90 - 110

Lab Sample ID: 660-83271-C-13 MS
Matrix: Water
Analysis Batch: 373938

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
Fluoride	0.13		1.00	1.14		mg/L		101	75 - 125

Lab Sample ID: 660-83271-C-13 MSD
Matrix: Water
Analysis Batch: 373938

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
Fluoride	0.13		1.00	1.12		mg/L		99	75 - 125	2	4

Lab Sample ID: 660-83312-C-9 DU
Matrix: Water
Analysis Batch: 373938

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.36			0.360		mg/L				0	4

Lab Sample ID: MB 400-373952/3
Matrix: Water
Analysis Batch: 373952

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			10/30/17 14:36	1

Lab Sample ID: LCS 400-373952/4
Matrix: Water
Analysis Batch: 373952

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	3.82		mg/L		96	90 - 110

Lab Sample ID: 400-144674-A-1 MS
Matrix: Water
Analysis Batch: 373952

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
Fluoride	0.58		1.00	1.65		mg/L		107	75 - 125

Lab Sample ID: 400-144674-A-1 MSD
Matrix: Water
Analysis Batch: 373952

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
Fluoride	0.58		1.00	1.62		mg/L		104	75 - 125	2	4

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 660-83348-D-5 DU
Matrix: Water
Analysis Batch: 373952

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Fluoride	1.1		1.12		mg/L		0	4

Lab Sample ID: MB 400-373975/3
Matrix: Water
Analysis Batch: 373975

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			10/30/17 15:44	1

Lab Sample ID: LCS 400-373975/4
Matrix: Water
Analysis Batch: 373975

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: 660-83348-C-3 MS
Matrix: Water
Analysis Batch: 373975

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
Fluoride	0.18	F1	1.00	0.720	F1	mg/L		54	75 - 125

Lab Sample ID: 660-83348-C-3 MSD
Matrix: Water
Analysis Batch: 373975

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
Fluoride	0.18	F1	1.00	0.710	F1	mg/L		53	75 - 125	1	4

Lab Sample ID: 400-144729-11 DU
Matrix: Water
Analysis Batch: 373975

Client Sample ID: AX24138 EB-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

Lab Sample ID: MB 400-374086/3
Matrix: Water
Analysis Batch: 374086

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			10/31/17 11:49	1

Lab Sample ID: LCS 400-374086/4
Matrix: Water
Analysis Batch: 374086

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	3.82		mg/L		96	90 - 110

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-144729-3 MS
Matrix: Water
Analysis Batch: 374086

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.37		1.00	1.36		mg/L		99	75 - 125

Lab Sample ID: 400-144729-3 MSD
Matrix: Water
Analysis Batch: 374086

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.37		1.00	1.33		mg/L		96	75 - 125	2	4

Lab Sample ID: 400-144729-25 DU
Matrix: Water
Analysis Batch: 374086

Client Sample ID: AX24168 MW-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.19		0.190		mg/L		0	4

Lab Sample ID: MB 400-374103/3
Matrix: Water
Analysis Batch: 374103

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			10/31/17 13:00	1

Lab Sample ID: LCS 400-374103/4
Matrix: Water
Analysis Batch: 374103

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	3.82		mg/L		96	90 - 110

Lab Sample ID: 400-144729-12 MS
Matrix: Water
Analysis Batch: 374103

Client Sample ID: AX24139 MW-6
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	1.12		mg/L		97	75 - 125

Lab Sample ID: 400-144729-12 MSD
Matrix: Water
Analysis Batch: 374103

Client Sample ID: AX24139 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	0.15		1.00	1.12		mg/L		97	75 - 125	0	4

Lab Sample ID: MB 400-374123/3
Matrix: Water
Analysis Batch: 374123

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			10/31/17 14:06	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: LCS 400-374123/4
Matrix: Water
Analysis Batch: 374123

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: 400-144729-19 MS
Matrix: Water
Analysis Batch: 374123

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.36		1.00	1.33		mg/L		97	75 - 125

Lab Sample ID: 400-144729-19 MSD
Matrix: Water
Analysis Batch: 374123

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.36		1.00	1.33		mg/L		97	75 - 125	0	4

Lab Sample ID: 400-144729-30 MS
Matrix: Water
Analysis Batch: 374123

Client Sample ID: AX24173 MW-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.34		1.00	1.28		mg/L		94	75 - 125

Lab Sample ID: 400-144729-30 MSD
Matrix: Water
Analysis Batch: 374123

Client Sample ID: AX24173 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	0.34		1.00	1.26		mg/L		92	75 - 125	2	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-372359/6
Matrix: Water
Analysis Batch: 372359

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.77	J	5.0	1.4	mg/L			10/18/17 08:39	1

Lab Sample ID: LCS 400-372359/7
Matrix: Water
Analysis Batch: 372359

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	13.8		mg/L		92	90 - 110

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-372359/3
Matrix: Water
Analysis Batch: 372359

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	5.13		mg/L		103	50 - 150

Lab Sample ID: MB 400-372654/6
Matrix: Water
Analysis Batch: 372654

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			10/20/17 07:37	1

Lab Sample ID: LCS 400-372654/13
Matrix: Water
Analysis Batch: 372654

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	14.0		mg/L		93	90 - 110

Lab Sample ID: MRL 400-372654/3
Matrix: Water
Analysis Batch: 372654

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	4.14	J	mg/L		83	50 - 150

Lab Sample ID: 400-144729-3 MS
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1600		700	2210		mg/L		92	77 - 128

Lab Sample ID: 400-144729-3 MSD
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1600		700	2250		mg/L		98	77 - 128	2	5

Lab Sample ID: 400-144729-12 MS
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24139 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2000		700	2550		mg/L		80	77 - 128

Lab Sample ID: 400-144729-12 MSD
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24139 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
Sulfate	2000		700	2660		mg/L		96	77 - 128	4	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144729-19 MS
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1600	F1 F2	700	2290		mg/L		101	77 - 128

Lab Sample ID: 400-144729-19 MSD
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1600	F1 F2	700	2860	F1 F2	mg/L		183	77 - 128	22	5

Lab Sample ID: MB 400-372685/6
Matrix: Water
Analysis Batch: 372685

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			10/20/17 11:15	1

Lab Sample ID: LCS 400-372685/7
Matrix: Water
Analysis Batch: 372685

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	13.6		mg/L		90	90 - 110

Lab Sample ID: MRL 400-372685/3
Matrix: Water
Analysis Batch: 372685

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	3.84	J	mg/L		77	50 - 150

Lab Sample ID: 400-144729-30 MS
Matrix: Water
Analysis Batch: 372685

Client Sample ID: AX24173 MW-19
Prep Type: Total/NA



Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2200		700	2820		mg/L		83	77 - 128

Lab Sample ID: 400-144729-30 MSD
Matrix: Water
Analysis Batch: 372685

Client Sample ID: AX24173 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
Sulfate	2200		700	2900		mg/L		94	77 - 128	3	5

Chain of Custody Record

Client Information Sampler: Ben Rothschild/Anthony Goggins Lab PM: Whitmire, Cheyenne R Client Contact: Keith Kornegay E-Mail: cheyenne.whitmire@testamericainc.com Phone:		Carrier Tracking No(s): 400-56525-24537.1 Page: Page 1 of 1 Job #:										
Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Calera State, Zip: AL, 35040 Phone: 205-664-6004 Email: lkorneg@southernco.com Project #: 40007143 CCR Site: Gorgas Landfill												
Due Date Requested: 10-31-17 TAT Requested (days):		Analysis Requested  400-144729 COC										
Perform MS/MSD (Yes or No)		Total Number of Containers										
Field Filtered Sample (Yes or No)		Special Instructions/Note:										
SM 4500 F C SM 4500 Cl E SM 4500 SO4 F		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 X - EDTA L - EDA Z - other (specify)										
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=organic)	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 F	Total Number of Containers	Special Instructions/Note:
AX24128	10/12/17	0935	G	Water				X	X	X	1	MW-13
AX24129	10/12/17	1045	G	Water				X	X	X	1	MW-14
AX24130	10/12/17	1200	G	Water			Y	X	X	X	1	MW-15
AX24131	10/12/17	1309	G	Water				X	X	X	1	MW-16
AX24132	10/12/17	1309	G	Water				X	X	X	1	MW-16 DUP
AX24133	10/12/17	1430	G	Water				X	X	X	1	MW-19
AX24134	10/12/17	1619	G	Water				X	X	X	1	MW-8
AX24135	10/12/17	1458	G	Water				X	X	X	1	MW-20
Possible Hazard Identification <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				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								
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:								
Empty Kit Relinquished by:				Method of Shipment:								
Relinquished by: Keith Kornegay Date/Time: 10/16/2017 12:00				Received by:  Date/Time: 10/17/17 1020 JRP								
Relinquished by:				Received by:								
Relinquished by:				Received by:								
Custody Seals Intact: Δ Yes Δ No				Cooler Temperature(s) °C and Other Remarks: 4.2 °C JRP								



Chain of Custody Record



Client Information Sampler: Nick Pitts/Anthony Goggins Lab PIV: Whitmire, Cheyenne R Client Contact: Keith Kornegay E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): 400-56525-24537.1 COC No: 400-56525-24537.1 Page: Page 1 of 1 Job #:			
Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Callera State/Zip: AL, 35040 Phone: 205-664-6004 Email: fkkorneg@southernco.com Project Name: CCR Site: Gorgas Landfill Project #: 40007143 SOW#:			
Due Date Requested: 10-31-17 TAT Requested (days):	PO #: WO #: Project #: SOW#:	Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> N Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> N SM 4500 F.C <input checked="" type="checkbox"/> N SM 4500 C.E <input checked="" type="checkbox"/> N SM 4500 S.O4.E <input checked="" type="checkbox"/> N Total Number of containers	
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: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)			
Special Instructions/Note:			
Sample Identification AX24136 AX24137 AX24138 AX24139 AX24140 AX24141 AX24142 AX24143	Sample Date 10/12/17 10/12/17 10/12/17 10/12/17 10/12/17 10/12/17 10/12/17	Sample Time 1557 1618 1645 1242 1616 1737 1242 1519	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air) Water Water Water Water Water Water Water Water Water
Possible Hazard Identification <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:			
Method of Shipment:			
Date/Time: 10/16/2017 12:00 Relinquished by: Keith Kornegay	Date/Time: 10/17/17 1020 Received by:	Date/Time:	Company: APC Company:
Date/Time:	Date/Time:	Date/Time:	Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks:			



Chain of Custody Record



Client Information		Sampler: Nick Pitts/Ben Rothschild		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-56525-24537.1	
Client Contact: Keith Kornegay		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1 of 1		Job #:	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		City: Calera		State/Zip: AL, 35040		Phone: 205-664-6004	
Email: kkkorneg@southernco.com		Project #: 40007143		SSOW#:		Site: Gorgas Landfill			
Due Date Requested: 10-31-17		TAT Requested (days):		PO #:		WO #:			
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Titrate, A=Air)	
AX24160	10/13/17	0924	G	Water	SM 4500 F.C	X	X	SM 4500 SO4.E	1
AX24161	10/13/17	1043	G	Water		X	X		1
AX24162	10/13/17	1150	G	Water		Y	X		1
AX24163	10/13/17	1150	G	Water		X	X		1
AX24164	10/13/17	1303	G	Water		X	X		1
AX24165	10/13/17	0906	G	Water		X	X		1
AX24166	10/13/17	1012	G	Water		X	X		1
AX24167	10/13/17	1002	G	Water		X	X		1
Special Instructions/Note:									
MW-13									
MW-14									
MW-15									
MW-15 DUP (Sample Duplicate)									
MW-16									
MW-20									
MW-6									
FB-2 (Field Blank)									
Total Number of containers									
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 M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify) Other:									
Analysis Requested									
Field Filtered Sample (Yes or No)									
Perform MS/MSD (Yes or No)									
SM 4500 F.C									
SM 4500 Cl.E									
SM 4500 SO4.E									
Special Instructions/Note:									
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
Possible Hazard Identification									
<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/Time: 10/16/2017 12:00									
Relinquished by: Keith Kornegay									
Date/Time:									
Relinquished by:									
Date/Time:									
Relinquished by:									
Date/Time:									
Custody Seal No.:									
<input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks:									

Received by: *[Signature]* Date/Time: 10/17/17
 Company: APC
 Received by: *[Signature]* Date/Time: 10/20/17
 Company: APC
 Received by: *[Signature]* Date/Time: 10/20/17
 Company: APC

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Chain of Custody Record

Client Information Sampler: Nick Pitts/Anthony Goggins Lab PM: Whitmire, Cheyenne R. Client Contact: Keith Kornegay E-Mail: cheyenne.whitmire@testamericainc.com Company: Alabama Power General Test Laboratory Camer Tracking No(s): Address: 744 County Rd 87 GSC #8 City: Callera State/Zip: AL, 35040 Phone: 205-664-6004 Email: fkkorneg@southernco.com Project Name: CCR SOW#: Gorgas Landfill			COC No: 400-56525-24537.1 Page: Page 1 of 1 Job #:			
Due Date Requested: 10-31-17 TAT Requested (days): PO #: WO #: Project #: 40007143 SOW#:			Analysis Requested Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No) SM 4500 F C SM 4500 Cl E SM 4500 SO4 E			
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=water/oil, BT=Tissue, A=Air) Preservation Code:			Total Number of containers Special Instructions/Note:			
AX24168	10/13/17	1123	G	Water	1	MW-7
AX24169	10/13/17	1123	G	Water	1	MW-7 Dup (Sample Duplicate)
AX24170	10/13/17	1255	G	Water	1	MW-8
AX24171	10/13/17	0857	G	Water	1	MW-18
AX24172	10/13/17	1021	G	Water	1	MW-5
AX24173	10/13/17	1313	G	Water	1	MW-19
AX24174	10/13/17	1326	G	Water	1	FB-1 Field Blank
AX24175	10/13/17	1330	G	Water	1	EB-1 (Equipment Blank)
Possible Hazard Identification <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 Relinquished by: Date/Time: 10/16/2017 12:00 Company: APC Relinquished by: Keith Kornegay Relinquished by: Date/Time: Company: Relinquished by: Date/Time: Company:						
Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:						



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144729-1
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144729

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.2°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Accreditation/Certification Summary

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

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Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-144723-1

TestAmerica SDG: Plant Gorgas CCB Landfills

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:

11/16/2017 2:17:22 PM

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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: 400-144723-1
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-1

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-333387. The following samples were reduced due to limited volume: AX24112 MW-13 (400-144723-1), AX24113 MW-14 (400-144723-2), AX24113 MW-14 (400-144723-2[MS]), AX24113 MW-14 (400-144723-2[MSD]), AX24114 MW-15 (400-144723-3), AX24115 MW-16 (400-144723-4), AX24116 MW-16 DUP (400-144723-5), AX24117 MW-19 (400-144723-6), AX24118 MW-8 (400-144723-7), AX24119 MW-20 (400-144723-8), AX24120 MW-7 (400-144723-9), AX24121 FB-2 (400-144723-10), AX24122 EB-1 (400-144723-11), AX24123 MW-6 (400-144723-12), AX24124 MW-5 (400-144723-13), AX24125 MW-18 (400-144723-14), AX24126 MW-6 DUP (400-144723-15) and AX24127 FB-1 (400-144723-16).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-333379. The following samples were reduced due to limited volume: AX24112 MW-13 (400-144723-1), AX24113 MW-14 (400-144723-2), AX24113 MW-14 (400-144723-2[MS]), AX24113 MW-14 (400-144723-2[MSD]), AX24114 MW-15 (400-144723-3), AX24115 MW-16 (400-144723-4), AX24116 MW-16 DUP (400-144723-5), AX24117 MW-19 (400-144723-6), AX24118 MW-8 (400-144723-7), AX24119 MW-20 (400-144723-8), AX24120 MW-7 (400-144723-9), AX24121 FB-2 (400-144723-10), AX24122 EB-1 (400-144723-11), AX24123 MW-6 (400-144723-12), AX24124 MW-5 (400-144723-13), AX24125 MW-18 (400-144723-14), AX24126 MW-6 DUP (400-144723-15) and AX24127 FB-1 (400-144723-16).

Method Summary

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

TestAmerica Job ID: 400-144723-1
SDG: Plant Gorgas CCB Landfills

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: 400-144723-1
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-1	AX24112 MW-13	Water	10/12/17 09:35	10/17/17 10:20
400-144723-2	AX24113 MW-14	Water	10/12/17 10:45	10/17/17 10:20
400-144723-3	AX24114 MW-15	Water	10/12/17 12:00	10/17/17 10:20
400-144723-4	AX24115 MW-16	Water	10/12/17 13:09	10/17/17 10:20
400-144723-5	AX24116 MW-16 DUP	Water	10/12/17 13:09	10/17/17 10:20
400-144723-6	AX24117 MW-19	Water	10/12/17 14:30	10/17/17 10:20
400-144723-7	AX24118 MW-8	Water	10/12/17 16:19	10/17/17 10:20
400-144723-8	AX24119 MW-20	Water	10/12/17 14:58	10/17/17 10:20
400-144723-9	AX24120 MW-7	Water	10/12/17 15:57	10/17/17 10:20
400-144723-10	AX24121 FB-2	Water	10/12/17 16:18	10/17/17 10:20
400-144723-11	AX24122 EB-1	Water	10/12/17 16:45	10/17/17 10:20
400-144723-12	AX24123 MW-6	Water	10/12/17 12:42	10/17/17 10:20
400-144723-13	AX24124 MW-5	Water	10/12/17 16:16	10/17/17 10:20
400-144723-14	AX24125 MW-18	Water	10/12/17 17:37	10/17/17 10:20
400-144723-15	AX24126 MW-6 DUP	Water	10/12/17 12:42	10/17/17 10:20
400-144723-16	AX24127 FB-1	Water	10/12/17 15:19	10/17/17 10:20

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24112 MW-13

Lab Sample ID: 400-144723-1

Date Collected: 10/12/17 09:35

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0585	U	0.0860	0.0862	1.00	0.146	pCi/L	10/23/17 09:40	11/14/17 10:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/23/17 09:40	11/14/17 10:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.420	U	0.295	0.298	1.00	0.458	pCi/L	10/23/17 10:15	10/30/17 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/23/17 10:15	10/30/17 14:05	1
Y Carrier	78.5		40 - 110					10/23/17 10:15	10/30/17 14:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.478		0.307	0.310	5.00	0.458	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24113 MW-14

Lab Sample ID: 400-144723-2

Date Collected: 10/12/17 10:45

Matrix: Water

Date Received: 10/17/17 10:20

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	0.0778	0.0781	1.00	0.119	pCi/L	10/23/17 09:40	11/14/17 10:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/23/17 09:40	11/14/17 10:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.261	U	0.292	0.292	1.00	0.478	pCi/L	10/23/17 10:15	10/30/17 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/23/17 10:15	10/30/17 14:05	1
Y Carrier	79.3		40 - 110					10/23/17 10:15	10/30/17 14:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.340	U	0.302	0.302	5.00	0.478	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24114 MW-15

Lab Sample ID: 400-144723-3

Date Collected: 10/12/17 12:00

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.147		0.0767	0.0778	1.00	0.0769	pCi/L	10/23/17 09:40	11/14/17 13:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/23/17 09:40	11/14/17 13:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.428	U	0.328	0.331	1.00	0.517	pCi/L	10/23/17 10:15	10/30/17 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/23/17 10:15	10/30/17 14:05	1
Y Carrier	77.8		40 - 110					10/23/17 10:15	10/30/17 14:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.575		0.337	0.340	5.00	0.517	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24115 MW-16

Lab Sample ID: 400-144723-4

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0845		0.0627	0.0631	1.00	0.0816	pCi/L	10/23/17 09:40	11/14/17 13:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/23/17 09:40	11/14/17 13:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.157	U	0.295	0.295	1.00	0.501	pCi/L	10/23/17 10:15	10/30/17 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/23/17 10:15	10/30/17 14:06	1
Y Carrier	81.9		40 - 110					10/23/17 10:15	10/30/17 14:06	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	0.241	U	0.302	0.302	5.00	0.501	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24116 MW-16 DUP

Lab Sample ID: 400-144723-5

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

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		0.0786	0.0794	1.00	0.0917	pCi/L	10/23/17 09:40	11/14/17 13:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/23/17 09:40	11/14/17 13:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.378	U	0.300	0.302	1.00	0.474	pCi/L	10/23/17 10:15	10/30/17 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/23/17 10:15	10/30/17 14:06	1
Y Carrier	81.9		40 - 110					10/23/17 10:15	10/30/17 14:06	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	0.502		0.310	0.312	5.00	0.474	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24117 MW-19

Lab Sample ID: 400-144723-6

Date Collected: 10/12/17 14:30

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.177		0.0835	0.0850	1.00	0.0841	pCi/L	10/23/17 09:40	11/14/17 13:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 09:40	11/14/17 13:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0108	U	0.292	0.292	1.00	0.519	pCi/L	10/23/17 10:15	10/30/17 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 10:15	10/30/17 14:06	1
Y Carrier	83.0		40 - 110					10/23/17 10:15	10/30/17 14:06	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	0.188	U	0.304	0.304	5.00	0.519	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24118 MW-8

Lab Sample ID: 400-144723-7

Date Collected: 10/12/17 16:19

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0928		0.0697	0.0702	1.00	0.0902	pCi/L	10/23/17 09:40	11/14/17 13:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 09:40	11/14/17 13:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.174	U	0.265	0.265	1.00	0.445	pCi/L	10/23/17 10:15	10/30/17 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 10:15	10/30/17 14:06	1
Y Carrier	85.2		40 - 110					10/23/17 10:15	10/30/17 14:06	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	0.267	U	0.274	0.274	5.00	0.445	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24119 MW-20

Lab Sample ID: 400-144723-8

Date Collected: 10/12/17 14:58

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.222		0.0942	0.0963	1.00	0.100	pCi/L	10/23/17 09:40	11/14/17 13:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/23/17 09:40	11/14/17 13:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.424	U	0.285	0.288	1.00	0.438	pCi/L	10/23/17 10:15	10/30/17 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/23/17 10:15	10/30/17 14:06	1
Y Carrier	80.4		40 - 110					10/23/17 10:15	10/30/17 14:06	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	0.646		0.300	0.304	5.00	0.438	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24120 MW-7

Lab Sample ID: 400-144723-9

Date Collected: 10/12/17 15:57

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0574	U	0.0602	0.0604	1.00	0.0938	pCi/L	10/23/17 09:40	11/14/17 13:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/23/17 09:40	11/14/17 13:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.125	U	0.261	0.261	1.00	0.449	pCi/L	10/23/17 10:15	10/30/17 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/23/17 10:15	10/30/17 14:06	1
Y Carrier	78.1		40 - 110					10/23/17 10:15	10/30/17 14:06	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	0.182	U	0.268	0.268	5.00	0.449	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24121 FB-2

Lab Sample ID: 400-144723-10

Date Collected: 10/12/17 16:18

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0281	U	0.0559	0.0559	1.00	0.101	pCi/L	10/23/17 09:40	11/14/17 13:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 09:40	11/14/17 13:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.297	U	0.282	0.283	1.00	0.454	pCi/L	10/23/17 10:15	10/30/17 14:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 10:15	10/30/17 14:07	1
Y Carrier	80.7		40 - 110					10/23/17 10:15	10/30/17 14:07	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	0.325	U	0.287	0.288	5.00	0.454	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24122 EB-1

Lab Sample ID: 400-144723-11

Date Collected: 10/12/17 16:45

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.000792	U	0.0498	0.0498	1.00	0.105	pCi/L	10/23/17 09:40	11/14/17 13:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 09:40	11/14/17 13:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.126	U	0.288	0.288	1.00	0.495	pCi/L	10/23/17 10:15	10/30/17 14:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 10:15	10/30/17 14:07	1
Y Carrier	77.8		40 - 110					10/23/17 10:15	10/30/17 14:07	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	0.127	U	0.292	0.292	5.00	0.495	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24123 MW-6

Lab Sample ID: 400-144723-12

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.193		0.0884	0.0901	1.00	0.0927	pCi/L	10/23/17 09:40	11/14/17 13:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/23/17 09:40	11/14/17 13:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.371	U	0.310	0.312	1.00	0.493	pCi/L	10/23/17 10:15	10/30/17 14:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/23/17 10:15	10/30/17 14:09	1
Y Carrier	80.7		40 - 110					10/23/17 10:15	10/30/17 14:09	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	0.564		0.322	0.325	5.00	0.493	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24124 MW-5

Lab Sample ID: 400-144723-13

Date Collected: 10/12/17 16:16

Matrix: Water

Date Received: 10/17/17 10:20

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		0.0803	0.0810	1.00	0.106	pCi/L	10/23/17 09:40	11/14/17 13:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/23/17 09:40	11/14/17 13:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.503	U	0.347	0.350	1.00	0.540	pCi/L	10/23/17 10:15	10/30/17 14:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/23/17 10:15	10/30/17 14:09	1
Y Carrier	79.6		40 - 110					10/23/17 10:15	10/30/17 14:09	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	0.627		0.356	0.359	5.00	0.540	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24125 MW-18

Lab Sample ID: 400-144723-14

Date Collected: 10/12/17 17:37

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0223	U	0.0553	0.0554	1.00	0.103	pCi/L	10/23/17 09:40	11/14/17 13:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/23/17 09:40	11/14/17 13:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0348	U	0.310	0.310	1.00	0.545	pCi/L	10/23/17 10:15	10/30/17 14:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/23/17 10:15	10/30/17 14:09	1
Y Carrier	80.0		40 - 110					10/23/17 10:15	10/30/17 14:09	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	0.0572	U	0.315	0.315	5.00	0.545	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24126 MW-6 DUP

Lab Sample ID: 400-144723-15

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.240		0.0952	0.0976	1.00	0.0873	pCi/L	10/23/17 09:40	11/14/17 13:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/23/17 09:40	11/14/17 13:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.529		0.311	0.315	1.00	0.464	pCi/L	10/23/17 10:15	10/30/17 14:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/23/17 10:15	10/30/17 14:09	1
Y Carrier	73.6		40 - 110					10/23/17 10:15	10/30/17 14:09	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	0.769		0.325	0.330	5.00	0.464	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24127 FB-1

Lab Sample ID: 400-144723-16

Date Collected: 10/12/17 15:19

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0229	U	0.0577	0.0577	1.00	0.106	pCi/L	10/23/17 09:40	11/14/17 14:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/23/17 09:40	11/14/17 14:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.206	U	0.316	0.317	1.00	0.531	pCi/L	10/23/17 10:15	10/30/17 14:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/23/17 10:15	10/30/17 14:09	1
Y Carrier	79.3		40 - 110					10/23/17 10:15	10/30/17 14:09	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	0.229	U	0.321	0.322	5.00	0.531	pCi/L		11/15/17 16:36	1

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-1
SDG: Plant Gorgas CCB Landfills

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: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24112 MW-13

Lab Sample ID: 400-144723-1

Date Collected: 10/12/17 09:35

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 10:12	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24113 MW-14

Lab Sample ID: 400-144723-2

Date Collected: 10/12/17 10:45

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 10:12	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24114 MW-15

Lab Sample ID: 400-144723-3

Date Collected: 10/12/17 12:00

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 13:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24115 MW-16

Lab Sample ID: 400-144723-4

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 13:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24116 MW-16 DUP

Lab Sample ID: 400-144723-5

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 13:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24117 MW-19

Lab Sample ID: 400-144723-6

Date Collected: 10/12/17 14:30

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 13:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24118 MW-8

Lab Sample ID: 400-144723-7

Date Collected: 10/12/17 16:19

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 13:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24119 MW-20

Lab Sample ID: 400-144723-8

Date Collected: 10/12/17 14:58

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 13:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24120 MW-7

Lab Sample ID: 400-144723-9

Date Collected: 10/12/17 15:57

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 13:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24121 FB-2

Lab Sample ID: 400-144723-10

Date Collected: 10/12/17 16:18

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 13:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24122 EB-1

Lab Sample ID: 400-144723-11

Date Collected: 10/12/17 16:45

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 13:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24123 MW-6

Lab Sample ID: 400-144723-12

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 13:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24124 MW-5

Lab Sample ID: 400-144723-13

Date Collected: 10/12/17 16:16

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 13:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24125 MW-18

Lab Sample ID: 400-144723-14

Date Collected: 10/12/17 17:37

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 13:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24126 MW-6 DUP

Lab Sample ID: 400-144723-15

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 13:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24127 FB-1

Lab Sample ID: 400-144723-16

Date Collected: 10/12/17 15:19

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333379	10/23/17 09:40	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 14:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333387	10/23/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 14:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	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: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Rad

Prep Batch: 333379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-1	AX24112 MW-13	Total/NA	Water	PrecSep-21	
400-144723-2	AX24113 MW-14	Total/NA	Water	PrecSep-21	
400-144723-3	AX24114 MW-15	Total/NA	Water	PrecSep-21	
400-144723-4	AX24115 MW-16	Total/NA	Water	PrecSep-21	
400-144723-5	AX24116 MW-16 DUP	Total/NA	Water	PrecSep-21	
400-144723-6	AX24117 MW-19	Total/NA	Water	PrecSep-21	
400-144723-7	AX24118 MW-8	Total/NA	Water	PrecSep-21	
400-144723-8	AX24119 MW-20	Total/NA	Water	PrecSep-21	
400-144723-9	AX24120 MW-7	Total/NA	Water	PrecSep-21	
400-144723-10	AX24121 FB-2	Total/NA	Water	PrecSep-21	
400-144723-11	AX24122 EB-1	Total/NA	Water	PrecSep-21	
400-144723-12	AX24123 MW-6	Total/NA	Water	PrecSep-21	
400-144723-13	AX24124 MW-5	Total/NA	Water	PrecSep-21	
400-144723-14	AX24125 MW-18	Total/NA	Water	PrecSep-21	
400-144723-15	AX24126 MW-6 DUP	Total/NA	Water	PrecSep-21	
400-144723-16	AX24127 FB-1	Total/NA	Water	PrecSep-21	
MB 160-333379/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-333379/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-144723-2 MS	AX24113 MW-14	Total/NA	Water	PrecSep-21	
400-144723-2 MSD	AX24113 MW-14	Total/NA	Water	PrecSep-21	

Prep Batch: 333387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-1	AX24112 MW-13	Total/NA	Water	PrecSep_0	
400-144723-2	AX24113 MW-14	Total/NA	Water	PrecSep_0	
400-144723-3	AX24114 MW-15	Total/NA	Water	PrecSep_0	
400-144723-4	AX24115 MW-16	Total/NA	Water	PrecSep_0	
400-144723-5	AX24116 MW-16 DUP	Total/NA	Water	PrecSep_0	
400-144723-6	AX24117 MW-19	Total/NA	Water	PrecSep_0	
400-144723-7	AX24118 MW-8	Total/NA	Water	PrecSep_0	
400-144723-8	AX24119 MW-20	Total/NA	Water	PrecSep_0	
400-144723-9	AX24120 MW-7	Total/NA	Water	PrecSep_0	
400-144723-10	AX24121 FB-2	Total/NA	Water	PrecSep_0	
400-144723-11	AX24122 EB-1	Total/NA	Water	PrecSep_0	
400-144723-12	AX24123 MW-6	Total/NA	Water	PrecSep_0	
400-144723-13	AX24124 MW-5	Total/NA	Water	PrecSep_0	
400-144723-14	AX24125 MW-18	Total/NA	Water	PrecSep_0	
400-144723-15	AX24126 MW-6 DUP	Total/NA	Water	PrecSep_0	
400-144723-16	AX24127 FB-1	Total/NA	Water	PrecSep_0	
MB 160-333387/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-333387/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-144723-2 MS	AX24113 MW-14	Total/NA	Water	PrecSep_0	
400-144723-2 MSD	AX24113 MW-14	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-333379/1-A
Matrix: Water
Analysis Batch: 337100

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333379

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.01810	U	0.0548	0.0548	1.00	0.125	pCi/L	10/23/17 09:40	11/14/17 10:12	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits					10/23/17 09:40	11/14/17 10:12	1
	110		40 - 110							

Lab Sample ID: LCS 160-333379/2-A
Matrix: Water
Analysis Batch: 337100

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333379

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.7	15.83		1.61	1.00	0.104	pCi/L	101	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits					10/23/17 09:40	11/14/17 10:12
	108		40 - 110						

Lab Sample ID: 400-144723-2 MS
Matrix: Water
Analysis Batch: 337100

Client Sample ID: AX24113 MW-14
Prep Type: Total/NA
Prep Batch: 333379

Analyte	Sample Sample		Spike Added	MS	MS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	Result	Qual		Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.0789	U	15.8	15.73		1.60	1.00	0.108	pCi/L	99	75 - 138
Carrier	MS MS		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits					10/23/17 09:40	11/14/17 10:12	1	
	102		40 - 110								

Lab Sample ID: 400-144723-2 MSD
Matrix: Water
Analysis Batch: 337100

Client Sample ID: AX24113 MW-14
Prep Type: Total/NA
Prep Batch: 333379

Analyte	Sample Sample		Spike Added	MSD	MSD	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
	Result	Qual		Result	Qual	Uncert. (2σ+/-)							
Radium-226	0.0789	U	15.8	15.10		1.55	1.00	0.118	pCi/L	95	75 - 138	0.20	1
Carrier	MSD MSD		Limits		Prepared	Analyzed	Dil Fac						
Ba Carrier	%Yield	Qualifier	Limits					10/23/17 09:40	11/14/17 10:12	1			
	97.6		40 - 110										

QC Sample Results

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

TestAmerica Job ID: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-333387/1-A
Matrix: Water
Analysis Batch: 334708

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333387

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3576	U	0.331	0.333	1.00	0.535	pCi/L	10/23/17 10:15	10/30/17 14:05	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					10/23/17 10:15	10/30/17 14:05	1
Y Carrier	75.5		40 - 110					10/23/17 10:15	10/30/17 14:05	1

Lab Sample ID: LCS 160-333387/2-A
Matrix: Water
Analysis Batch: 334708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333387

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	17.0	18.77		2.01	1.00	0.461	pCi/L	111	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	108		40 - 110						
Y Carrier	79.6		40 - 110						

Lab Sample ID: 400-144723-2 MS
Matrix: Water
Analysis Batch: 334708

Client Sample ID: AX24113 MW-14
Prep Type: Total/NA
Prep Batch: 333387

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.261	U	17.0	18.77		2.02	1.00	0.439	pCi/L	109	45 - 150
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	102		40 - 110								
Y Carrier	78.5		40 - 110								

Lab Sample ID: 400-144723-2 MSD
Matrix: Water
Analysis Batch: 334708

Client Sample ID: AX24113 MW-14
Prep Type: Total/NA
Prep Batch: 333387

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.261	U	17.0	18.60		2.02	1.00	0.506	pCi/L	108	45 - 150	0.04	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	97.6		40 - 110										
Y Carrier	80.0		40 - 110										

Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Sampler: Ben Rothschild/Nick Pitts		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-56525-24537.1	
Client Contact: Keith Kornegay		Phone:		Page: Page 1 of 1	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		Job #:	
City: Calera		State, Zip: AL, 35040		Preservation Codes:	
Phone: 205-664-6004		Email: kkkorneg@southernco.com		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Project Name: CCR		Project #: 40007143		Total Number of Containers	
Site: Gorgas Landfill		SSOW#:		Other:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sewage, Groundwater, Soil, Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Special Instructions/Note:
AX24112	10/12/17	0935	G	Water	X	X	MW-13
AX24113	10/12/17	1045	G	Water	Y	X	MW-14
AX24114	10/12/17	1200	G	Water	X	X	MW-15
AX24115	10/12/17	1309	G	Water	X	X	MW-16
AX24116	10/12/17	1309	G	Water	X	X	MW-16 DUP (Sample Duplicate)
AX24117	10/12/17	1430	G	Water	X	X	MW-19
AX24118	10/12/17	1619	G	Water	X	X	MW-8
AX24119	10/12/17	1458	G	Water	X	X	MW-20

Analysis Requested

9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc

400-144723 COC

QR Code: [Image]

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:

Relinquished by: Keith Kornegay	Date: 10/16/2017 12:00	Company: APC
Relinquished by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:

Cooler Temperature(s) °C and Other Remarks: 19.2, 19.0°C



Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Sampler: Nick Pitts/Anthony Goggins		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-56525-24537.1	
Client Contact: Keith Kornejag		Phone:		Page: Page 1 of 1	
Company: Alabama Power General Test Laboratory		Due Date Requested: 11.17.17		Job #:	
Address: 744 County Rd 87 GSC #8		TAT Requested (days):		Total Number of Containers	
City: Calera		PO #:		Preservation Codes:	
State, Zip: AL, 35040		WO #:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anion H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Phone: 205-664-6004		Project #:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Email: kkkornejag@southernco.com		SSOW#:		Special Instructions/Note:	
Project Name: CCR		40007143		9315_Paz26, 9320_Paz26, 9320_Paz26_GFP	
Site: Gorgas Landfill					

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Overstabil)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Preservation Code:	Special Instructions/Note:
AX24120	10/12/17	1557	G	Water	X	X	D	MW-7
AX24121	10/12/17	1618	G	Water	X	X		FB-2 (Field Blank)
AX24122	10/12/17	1645	G	Water	X	X		EB-1 (Equipment Blank)
AX24123	10/12/17	1242	G	Water	X	X		MW-6
AX24124	10/12/17	1616	G	Water	X	X		MW-5
AX24125	10/12/17	1737	G	Water	X	X		MW-18
AX24126	10/12/17	1242	G	Water	X	X		MMW-6DUP (Sample Duplicate)
AX24127	10/12/17	1519	G	Water	X	X		FB-1 (Field Blank)

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

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: Keith Kornejag Date/Time: 10/16/2017 12:00
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Custody Seals Intact: Yes No
 Custody Seal No.: _____
 Cooler Temperature(s) °C and Other Remarks:



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-1
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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: 400-144723-1
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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

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
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	11-30-17 *
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	12-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	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: 400-144723-1
SDG: Plant Gorgas CCB Landfills

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	02-21-18
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



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 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 (1L): Radiological		
Comments	No temperature preservation requirement.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-20	10/12/2017	14:58	1	Groundwater		AX24119
MW-7	10/12/2017	15:57	1	Groundwater		AX24120
FB-2	10/12/2017	16:18	1	Field Blank		AX24121
EB-1	10/12/2017	16:45	1	Equipment Blank		AX24122

Relinquished By	Received By	Date/Time
 <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=K28TROTH@southernco.com, c=US Date: 2017.10.13 15:56:10 -0500</small>	 <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornega@southernco.com, c=US Date: 2017.10.13 18:28:43 -0500</small>	10/12/2017 17:05
Benjamin Rothschadl	Keith Kornegay	10/13/2017 18:28

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2	<input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	Cooler Temp	NA
		Thermometer ID	NA
		pH Strip ID	6153-32042-10-9



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 17:30

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="Ben Rothschadl"/>	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-14. No temperature preservation requirement."/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/12/2017	09:35	1	Groundwater		AX24112
MW-14	10/12/2017	10:45	3	Groundwater		AX24113
MW-15	10/12/2017	12:00	1	Groundwater		AX24114
MW-16	10/12/2017	13:09	1	Groundwater		AX24115
MW-16 DUP	10/12/2017	13:09	1	Sample Duplicate		AX24116
MW-19	10/12/2017	14:30	1	Groundwater		AX24117
MW-8	10/12/2017	16:19	1	Groundwater		AX24118

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=fkornegay@southemco.com, c=US Date: 2017.10.13 18:25:54 -0500</small>	10/13/2017 18:26

SmarTroll ID <input type="text" value="5151-26193-1-1"/>	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID <input type="text" value="3901-20010-2-2"/>	
Cooler Temp <input type="text" value="NA"/>	
Thermometer ID <input type="text" value="NA"/>	
pH Strip ID <input type="text" value="6153-32042-10-9"/>	



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 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="Anthony Goggins"/>	Location	<input type="text" value="Gorgas Landfill"/>
Analysis Requested	<input type="text" value="Bottle 1 (1L): Radiological"/>		
Comments	<input type="text" value="No temperature preservation requirement."/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-6	10/12/2017	12:42	1	Groundwater		AX24123
MW-5	10/12/2017	16:16	1	Groundwater		AX24124
MW-18	10/12/2017	17:37	1	Groundwater		AX24125
MW-6DUP	10/12/2017	12:42	1	Sample Duplicate		AX24126
FB-1	10/12/2017	15:19	1	Field Blank		AX24127

Relinquished By	Received By	Date/Time
		<input type="text" value="10/13/2017 13:47"/>
Benjamin Rothschadl <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=XZ8TROTH@southernco.com, c=US Date: 2017.10.13 15:59:41 -0500</small>	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornega@southernco.com, c=US Date: 2017.10.13 18:18:35 -0500</small>	<input type="text" value="10/13/2017 18:18"/>

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="3901-20009-2-1"/>	
Cooler Temp <input type="text" value="NA"/>	
Thermometer ID <input type="text" value="NA"/>	pH Strip ID <input type="text" value="6153-32042-10-9"/>

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

 Alabama Power



Sample Group : WMWGORLF_1119

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1119

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 anions were outsourced to Test America, Pensacola for analysis. Listed below is the case narrative provided by Test America:

**Job Narrative
400-144729-1
General Chemistry**

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373975 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 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24134 MW-8 (400-144729-7) and AX24170 MW-8 (400-144729-27). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 Cl- E: The CCV (35.7416) and CCB (0.4128) closing the bracket on the following samples: AX24164 MW-16 (400-144729-21), AX24165 MW-20 (400-144729-22), AX24166 MW-6 (400-144729-23), AX24167 FB-2 (400-144729-24), AX24168 MW-7(400-144729-25), AX24169 MW-7 DUP (400-144729-26), AX24170 MW-8 (400-144729-27), AX24171 MW-18 (400-144729-28), AX24172 MW-5 (400-144729-29) and AX24173 MW-19 (400-144729-30) did not transfer to TALS properly, but is reflected on the raw data sheet attached to batch 372717.

Method(s) SM 4500 Cl- E: The method blank for analytical batch 372717 contained Chloride. This target analyte concentration was less than the method detection limit (MDL) and reporting limit (RL); therefore, re-analysis of samples was not performed.

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 372717 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.

Method(s) SM 4500 SO4 E: The method blank for analytical batch 372359 contained Sulfate below the method detection limit and at concentration less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24128 MW-13 (400-144729-1), AX24129 MW-14 (400-144729-2), AX24130 MW-15 (400-144729-3), AX24130 MW-15 (400-144729-3[MS]), AX24130 MW-15 (400-144729-3[MSD]), AX24131 MW-16 (400-144729-4), AX24132 MW-16 DUP (400-144729-5), AX24133 MW-19 (400-144729-6), AX24134 MW-8 (400-144729-7), AX24135 MW-20 (400-144729-8), AX24136 MW-7 (400-144729-9), AX24139 MW-6 (400-144729-12), AX24139 MW-6 (400-144729-12[MS]), AX24139 MW-6 (400-144729-12[MSD]), AX24140 MW-5 (400-144729-13), AX24141 MW-18 (400-144729-14), AX24142 MW-6 DUP (400-144729-15), AX24143 FB-1 (400-144729-16), AX24160 MW-13 (400-144729-17), AX24161 MW-14 (400-144729-18), AX24162 MW-15 (400-144729-19), AX24162 MW-15 (400-144729-19[MS]), AX24162 MW-15 (400-144729-19[MSD]), AX24163 MW-15 DUP (400-144729-20), AX24164 MW-16 (400-144729-21), AX24165 MW-20 (400-144729-22), AX24166 MW-6 (400-144729-23), AX24167 FB-2 (400-144729-24), AX24168 MW-7 (400-144729-25), AX24169 MW-7 DUP (400-144729-26), AX24170 MW-8 (400-144729-27), AX24171 MW-18 (400-144729-28), AX24172 MW-5 (400-144729-29), AX24173 MW-19 (400-144729-30), AX24173 MW-19 (400-144729-30[MS]) and AX24173 MW-19 (400-144729-30[MSD]). AX24174 FB-1 (400-144729-31) and AX24175 EB-1 (400-144729-32). 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 372654 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.



Metals ICP

Gorgas Landfill

WMWGORLF_1119

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>
AX24160	20171017CK	WMWGORLF_1119
AX24161	20171017CK	WMWGORLF_1119
AX24162	20171017CK	WMWGORLF_1119
AX24163	20171017CK	WMWGORLF_1119
AX24164	20171017CK	WMWGORLF_1119
AX24165	20171017CK	WMWGORLF_1119
AX24166	20171017CK	WMWGORLF_1119
AX24167	20171017CK	WMWGORLF_1119
AX24168	20171017CK	WMWGORLF_1119
AX24169	20171017CK	WMWGORLF_1119
AX24170	20171020AK	WMWGORLF_1119
AX24171	20171020AK	WMWGORLF_1119
AX24172	20171020AK	WMWGORLF_1119
AX24173	20171020AK	WMWGORLF_1119
AX24174	20171020AK	WMWGORLF_1119
AX24175	20171020AK	WMWGORLF_1119

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

General Quality Control Procedures:

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



- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- An additional Rinse was added between samples for monitoring Lithium due to possible matrix issues.
- 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	AX24169

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 dilution to compensate for any possible matrix effects. The following samples were further diluted due to analyzed sample concentration over the high standard of the calibration curve.

Case Narrative



<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AX24160	Calcium	x10
AX24161	Calcium	x10
AX24162	Calcium	x10
AX24163	Calcium	x10
AX24164	Calcium	x10
AX24165	Calcium	x10
AX24166	Calcium	x10
AX24168	Calcium	x10
AX24169	Calcium	x10
AX24169MS	Calcium	x10
AX24169MSD	Calcium	x10
AX24170	Calcium	x10
AX24171	Calcium	x10
AX24172	Calcium	x10
AX24173	Calcium	x100
AX24174	Calcium	x10

8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1119

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>
AX24160	604479	WMWGORLF_1119
AX24161	604479	WMWGORLF_1119
AX24162	604479	WMWGORLF_1119
AX24163	604479	WMWGORLF_1119
AX24164	604480	WMWGORLF_1119
AX24165	604480	WMWGORLF_1119
AX24166	604480	WMWGORLF_1119
AX24167	604480	WMWGORLF_1119
AX24168	604480	WMWGORLF_1119
AX24169	604480	WMWGORLF_1119
AX24170	604480	WMWGORLF_1119
AX24171	604480	WMWGORLF_1119
AX24172	604480	WMWGORLF_1119
AX24173	604480	WMWGORLF_1119
AX24174	604481	WMWGORLF_1119
AX24175	604481	WMWGORLF_1119

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_1119

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>
AX24160	604489	WMWGORLF_1119
AX24161	604489	WMWGORLF_1119
AX24162	604489	WMWGORLF_1119
AX24163	604489	WMWGORLF_1119
AX24164	604489	WMWGORLF_1119
AX24165	604489	WMWGORLF_1119
AX24166	604489	WMWGORLF_1119
AX24167	604489	WMWGORLF_1119
AX24168	604489	WMWGORLF_1119
AX24169	604489	WMWGORLF_1119
AX24170	604490	WMWGORLF_1119
AX24171	604490	WMWGORLF_1119
AX24172	604490	WMWGORLF_1119
AX24173	604490	WMWGORLF_1119
AX24174	604490	WMWGORLF_1119
AX24175	604490	WMWGORLF_1119

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_1119

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>
AX24160	604740	WMWGORLF_1119
AX24161	604491	WMWGORLF_1119
AX24162	604491	WMWGORLF_1119
AX24163	604491	WMWGORLF_1119
AX24164	604491	WMWGORLF_1119
AX24165	604491	WMWGORLF_1119
AX24166	604491	WMWGORLF_1119
AX24167	604491	WMWGORLF_1119
AX24168	604491	WMWGORLF_1119
AX24169	604491	WMWGORLF_1119
AX24170	604491	WMWGORLF_1119
AX24171	604873	WMWGORLF_1119
AX24172	604492	WMWGORLF_1119
AX24173	604492	WMWGORLF_1119
AX24174	604492	WMWGORLF_1119
AX24175	604492	WMWGORLF_1119

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 0.5 mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5% with the exception of batch 604492. The results were less than 5 times the MDL. A laboratory control sample was analyzed with each batch. All criteria were met.
- All samples were between 2.5 mg and 200 mg residue except for samples AX24167, AX24174, AX24175 which did not meet the 2.5mg residue.

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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24160

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0149	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	J 0.0600	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10		1.0	5.0	312	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0214	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	J 0.0198	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/18/2017	SM 2540C	1			250	3340	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1		0.60	2.00	2.5	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1		0.032	0.10	0.20	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	70		98.0	350	2000	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24160

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit
			MB	Limit					Limit	Rec	Limit	Prec	
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115	104	70 to 130	0.0853	20
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115	99.6	70 to 130	1.62	20
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115	111	70 to 130	0.704	20
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115	102	70 to 130	1.28	20
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115	102	70 to 130	0.740	20
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115	110	70 to 130	2.56	20
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115	107	70 to 130	1.64	20
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115	111	70 to 130	0.484	20
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.51	20
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115	102	70 to 130	3.96	20
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.50	20
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	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: WMWGORLF
 Sample Date: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24160

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24160	Solids, Dissolved	mg/L	2.00	25			3310	56.0	40 to 60		0.451 5

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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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24161

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	J	0.00152	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0130	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2			0.02	0.1	J	0.0464	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10			1.0	5.0		317	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0115	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2			0.010	0.05	J	0.0333	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1				250		3070	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1			0.60	2.00		2.2	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1			0.032	0.10		0.25	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	70			98.0	350		1800	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24161

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit
			MB	Limit					Limit	Rec	Limit	Prec	
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115	102	70 to 130	1.28	20
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115	104	70 to 130	0.0853	20
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115	102	70 to 130	0.740	20
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115	110	70 to 130	2.56	20
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115	107	70 to 130	1.64	20
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115	111	70 to 130	0.484	20
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.51	20
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115	102	70 to 130	3.96	20
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.50	20
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115	99.6	70 to 130	1.62	20
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115	111	70 to 130	0.704	20
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24161

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24170	Solids, Dissolved	mg/L	6.00	25			2810	48.0	40 to 60	1.26	5

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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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24162

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01		0.0126	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7			2	0.02	0.1	J	0.0535	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7			10	1.0	5.0		269	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01		0.0705	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7			2	0.010	0.05		0.0614	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/17/2017	SM 2540C			1		125		2680	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E			1	0.60	2.00	J	1.8	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C			1	0.032	0.10		0.36	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E			70	98.0	350		1600	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24162

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20	
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115	102	70 to 130	1.28	20	
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115	99.6	70 to 130	1.62	20	
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115	111	70 to 130	0.704	20	
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115	104	70 to 130	0.0853	20	
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115	102	70 to 130	0.740	20	
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115	110	70 to 130	2.56	20	
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20	
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20	
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115	107	70 to 130	1.64	20	
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115	111	70 to 130	0.484	20	
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.51	20	
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115	102	70 to 130	3.96	20	
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.50	20	
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24162

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24170	Solids, Dissolved	mg/L	6.00	25			2810	48.0	40 to 60	1.26	5

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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: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-15 DUP

Laboratory ID Number: AX24163

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01		0.0121	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7			2	0.02	0.1	J	0.0532	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7			10	1.0	5.0		264	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01		0.0705	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7			2	0.010	0.05		0.0609	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/17/2017	SM 2540C			1		250		2680	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E			1	0.60	2.00		2.0	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C			1	0.032	0.10		0.36	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E			70	98.0	350		1500	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

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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: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-15 DUP

Laboratory ID Number: AX24163

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20	
AX24163	Cadmium, Total	mg/L	-0.000000591	0.00066	0.10	0.102	0.100	0.101	0.085 to 0.115	102	70 to 130	1.28	20	
AX24163	Selenium, Total	mg/L	0.0000789	0.0044	0.10	0.104	0.105	0.103	0.085 to 0.115	104	70 to 130	0.0853	20	
AX24163	Antimony, Total	mg/L	0.0000801	0.00132	0.10	0.0996	0.0980	0.0977	0.085 to 0.115	99.6	70 to 130	1.62	20	
AX24163	Arsenic, Total	mg/L	0.0000104	0.0022	0.10	0.111	0.112	0.103	0.085 to 0.115	111	70 to 130	0.704	20	
AX24163	Barium, Total	mg/L	-0.00000283	0.0044	0.10	0.115	0.115	0.0981	0.085 to 0.115	102	70 to 130	0.740	20	
AX24163	Cobalt, Total	mg/L	-0.000000116	0.0044	0.10	0.181	0.176	0.0998	0.085 to 0.115	110	70 to 130	2.56	20	
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20	
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20	
AX24163	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.107	0.108	0.107	0.085 to 0.115	107	70 to 130	1.64	20	
AX24163	Chromium, Total	mg/L	0.00000645	0.0044	0.10	0.111	0.111	0.103	0.085 to 0.115	111	70 to 130	0.484	20	
AX24163	Lead, Total	mg/L	0.00000617	0.0022	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.51	20	
AX24163	Molybdenum, Total	mg/L	0.00000667	0.0044	0.10	0.102	0.0982	0.0936	0.085 to 0.115	102	70 to 130	3.96	20	
AX24163	Thallium, Total	mg/L	0.00000449	0.00044	0.10	0.113	0.111	0.103	0.085 to 0.115	113	70 to 130	1.50	20	
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-15 DUP

Laboratory ID Number: AX24163

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24170	Solids, Dissolved	mg/L	6.00	25			2810	48.0	40 to 60	1.26	5

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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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24164

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	J	0.00399	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0141	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2			0.02	0.1	J	0.0468	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10			1.0	5.0		297	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	J	0.00981	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2			0.010	0.05	J	0.0164	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1				125		2340	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1			0.60	2.00	B	4.3	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1			0.032	0.10		0.17	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	60			84.0	300		1300	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24164

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	20
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	20
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	20
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	20
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	20

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Laboratory certification ID: E571114

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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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24164

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24170	Solids, Dissolved	mg/L	6.00	25			2810	48.0	40 to 60	1.26	5

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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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24165

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0161	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	0.106	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10		1.0	5.0	354	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	0.253	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1			250	2640	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1		0.60	2.00	B 5.0	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1		0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	70		98.0	350	1600	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24165

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20	
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20	
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20	
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20	
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20	
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20	
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	20	
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20	
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	20	
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20	
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	20	
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	20	
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20	
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20	
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24165

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24170	Solids, Dissolved	mg/L	6.00	25			2810	48.0	40 to 60	1.26	5

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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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24166

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	J	0.00487	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0124	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2			0.02	0.1	J	0.0803	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10			1.0	5.0		396	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0271	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2			0.010	0.05		0.249	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1				250		3250	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1			0.60	2.00	B	3.0	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1			0.032	0.10		0.15	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	70			98.0	350		2000	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24166

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	20
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	20
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	20
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	20
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	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: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24166

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24170	Solids, Dissolved	mg/L	6.00	25				2810	48.0	40 to 60			1.26 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, 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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24167

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	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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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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24167

Sample	Analysis	Units	MB				LFB			Rec		Prec	
			MB	Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	20
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	20
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	20
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	20
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24167

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24170	Solids, Dissolved	mg/L	6.00	25			2810	48.0	40 to 60	1.26	5

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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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24168

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	J	0.00181	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0147	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2			0.02	0.1	J	0.0674	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10			1.0	5.0		302	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	J	0.00341	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2			0.010	0.05		0.127	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1				125		2420	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1			0.60	2.00	B	32	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1			0.032	0.10		0.19	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	70			98.0	350		1400	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24168

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB	Rec		Prec	Limit	
			MB	Limit					Limit	Prec			
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	20
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	20
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	20
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	20
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24168

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX24170	Solids, Dissolved	mg/L	6.00	25			2810	48.0	40 to 60			1.26	5

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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



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-7 Dup

Laboratory ID Number: AX24169

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	J	0.00185	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0143	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/17/2017	EPA 200.7	2			0.02	0.1	J	0.0678	mg/L
* Calcium, Total	HRG	10/17/2017	EPA 200.7	10			1.0	5.0		309	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	J	0.00310	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/17/2017	EPA 200.7	2			0.010	0.05		0.128	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1				125		2480	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1			0.60	2.00	B	32	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1			0.032	0.10		0.19	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	60			84.0	300		1400	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
 Calcium recovery is out of range. The spike amount was less than 30% of the sample amount. SGC 11/29/17

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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-7 Dup

Laboratory ID Number: AX24169

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24169	Boron, Total	mg/L	0.000387	0.044	1.00	1.04	1.03	0.970	0.85 to 1.15	97.0	70 to 130	1.09	20	
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20	
AX24169	Calcium, Total	mg/L	0.000851	0.22	5.00	320	320	4.93	4.25 to 5.75	220	70 to 130	0.00	20	
AX24169	Mercury, Total by CVAA	mg/L	-0.000000906	0.0005	0.004	0.00370	0.00374	0.00374	0.0034 to 0.0046	92.6	70 to 130	1.02	20	
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20	
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20	
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	20	
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20	
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	20	
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20	
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	20	
AX24169	Lithium, Total	mg/L	-0.0000391	0.022	0.20	0.364	0.349	0.190	0.17 to 0.23	118	70 to 130	4.19	20	
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20	
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20	
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	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
 Calcium recovery is out of range. The spike amount was less than 30% of the sample amount. SGC 11/29/17

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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-7 Dup

Laboratory ID Number: AX24169

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX24170	Solids, Dissolved	mg/L	6.00	25				2810	48.0	40 to 60			1.26	5

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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
 Calcium recovery is out of range. The spike amount was less than 30% of the sample amount. SGC 11/29/17

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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24170

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	J	0.00159	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01		0.0148	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2			0.02	0.1	J	0.0831	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10			1.0	5.0		298	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	J	0.00520	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2			0.010	0.05		0.189	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1				250		2740	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	5			3.00	10	B	130	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1			0.032	0.10		0.23	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	70			98.0	350		1600	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24170

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24175	Boron, Total	mg/L	-0.000152	0.044	1.00	0.940	0.955	0.955	0.85 to 1.15	94.0	70 to 130	1.59	20
AX24175	Calcium, Total	mg/L	-0.0183	0.22	5.00	4.82	4.85	4.80	4.25 to 5.75	96.4	70 to 130	0.686	20
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20
AX24175	Lithium, Total	mg/L	0.0000163	0.022	0.20	0.186	0.186	0.188	0.17 to 0.23	92.8	70 to 130	0.403	20
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	20
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	20
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	20
AX24175	Mercury, Total by CVAA	mg/L	-0.00000285	0.0005	0.004	0.00372	0.00372	0.00374	0.0034 to 0.0046	93.1	70 to 130	0.0376	20
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	20

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Comments: Test America, Pensacola NELAP ID: E81010

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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: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24170

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24170	Solids, Dissolved	mg/L	6.00	25				2810	48.0	40 to 60			1.26 5

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Expiration: June 30, 2018

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 FAX (205) 257-1654

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24171

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	0.0104	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0357	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	326	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	0.0614	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	J 0.00267	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/20/2017	SM 2540C	1			250	3140	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1		0.60	2.00	B 2.3	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1		0.032	0.10	0.32	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	70		98.0	350	1900	mg/L

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Laboratory certification ID: E571114

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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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24171

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24175	Boron, Total	mg/L	-0.000152	0.044	1.00	0.940	0.955	0.955	0.85 to 1.15	94.0	70 to 130	1.59	20	
AX24175	Calcium, Total	mg/L	-0.0183	0.22	5.00	4.82	4.85	4.80	4.25 to 5.75	96.4	70 to 130	0.686	20	
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20	
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	20	
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20	
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20	
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	20	
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20	
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20	
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	20	
AX24175	Mercury, Total by CVAA	mg/L	-0.00000285	0.0005	0.004	0.00372	0.00372	0.00374	0.0034 to 0.0046	93.1	70 to 130	0.0376	20	
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20	
AX24175	Lithium, Total	mg/L	0.0000163	0.022	0.20	0.186	0.186	0.188	0.17 to 0.23	92.8	70 to 130	0.403	20	
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20	
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	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
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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: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24171

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24271	Solids, Dissolved	mg/L	1.00	25			3770	45.0	40 to 60		0.396 5

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24172

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01		0.0115	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7			2	0.02	0.1	J	0.0287	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7			10	1.0	5.0		389	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7			2	0.010	0.05		0.0935	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/17/2017	SM 2540C			1		250		3960	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E			1	0.60	2.00	B	8.0	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C			1	0.032	0.10		0.36	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E			70	98.0	350		2300	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24172

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit
			MB	Limit					Limit	Rec	Limit	Prec	
AX24175	Boron, Total	mg/L	-0.000152	0.044	1.00	0.940	0.955	0.955	0.85 to 1.15	94.0	70 to 130	1.59	20
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20
AX24175	Calcium, Total	mg/L	-0.0183	0.22	5.00	4.82	4.85	4.80	4.25 to 5.75	96.4	70 to 130	0.686	20
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20
AX24175	Lithium, Total	mg/L	0.0000163	0.022	0.20	0.186	0.186	0.188	0.17 to 0.23	92.8	70 to 130	0.403	20
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	20
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	20
AX24175	Mercury, Total by CVAA	mg/L	-0.00000285	0.0005	0.004	0.00372	0.00372	0.00374	0.0034 to 0.0046	93.1	70 to 130	0.0376	20
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	20
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	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
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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24172

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24175	Solids, Dissolved	mg/L	6.00	25				3.3	48.0	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, 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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24173

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	0.0113	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7		2	0.02	0.1	J 0.0384	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		100	10	50	381	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	0.171	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7		2	0.010	0.05	0.0853	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/17/2017	SM 2540C		1		250	3890	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E		1	0.60	2.00	B 2.6	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C		1	0.032	0.10	0.34	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E		70	98.0	350	2200	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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24173

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24175	Boron, Total	mg/L	-0.000152	0.044	1.00	0.940	0.955	0.955	0.85 to 1.15	94.0	70 to 130	1.59	20
AX24175	Calcium, Total	mg/L	-0.0183	0.22	5.00	4.82	4.85	4.80	4.25 to 5.75	96.4	70 to 130	0.686	20
AX24173	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.115	0.112	0.110	0.085 to 0.115	115	70 to 130	2.64	20
AX24173	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.115	0.112	0.109	0.085 to 0.115	115	70 to 130	2.53	20
AX24175	Lithium, Total	mg/L	0.0000163	0.022	0.20	0.186	0.186	0.188	0.17 to 0.23	92.8	70 to 130	0.403	20
AX24173	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.101	0.107	0.085 to 0.115	103	70 to 130	2.12	20
AX24173	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.284	0.275	0.107	0.085 to 0.115	113	70 to 130	3.03	20
AX24173	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.114	0.110	0.115	0.085 to 0.115	114	70 to 130	4.35	20
AX24173	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.116	0.113	0.111	0.085 to 0.115	116	70 to 130	2.33	20
AX24173	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.0337	20
AX24175	Mercury, Total by CVAA	mg/L	-0.00000285	0.0005	0.004	0.00372	0.00372	0.00374	0.0034 to 0.0046	93.1	70 to 130	0.0376	20
AX24173	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0993	0.102	0.085 to 0.115	101	70 to 130	1.50	20
AX24173	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.115	0.113	0.110	0.085 to 0.115	115	70 to 130	1.82	20
AX24173	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.120	0.114	0.104	0.085 to 0.115	109	70 to 130	4.75	20
AX24173	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.103	0.1000	0.0982	0.085 to 0.115	103	70 to 130	3.15	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
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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24173

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec		
			Limit	Limit			Duplicate	LFB	Limit	Limit		
AX24175	Solids, Dissolved	mg/L	6.00	25			3.3	48.0	40 to 60		0.00	5

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CC:

Alabama Power General Test Laboratory
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 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-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24174

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/20/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	mg/L

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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: WMWGORLFFB
 Sample Date: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24174

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit
			MB	Limit					Limit	Rec	Limit	Prec	
AX24175	Boron, Total	mg/L	-0.000152	0.044	1.00	0.940	0.955	0.955	0.85 to 1.15	94.0	70 to 130	1.59	20
AX24175	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.113	0.111	0.110	0.085 to 0.115	113	70 to 130	1.45	20
AX24175	Mercury, Total by CVAA	mg/L	-0.00000285	0.0005	0.004	0.00372	0.00372	0.00374	0.0034 to 0.0046	93.1	70 to 130	0.0376	20
AX24175	Calcium, Total	mg/L	-0.0183	0.22	5.00	4.82	4.85	4.80	4.25 to 5.75	96.4	70 to 130	0.686	20
AX24175	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.112	0.111	0.110	0.085 to 0.115	112	70 to 130	1.17	20
AX24175	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.114	0.112	0.111	0.085 to 0.115	114	70 to 130	1.72	20
AX24175	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.109	0.108	0.109	0.085 to 0.115	109	70 to 130	0.715	20
AX24175	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.546	20
AX24175	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.110	0.107	0.107	0.085 to 0.115	110	70 to 130	2.39	20
AX24175	Lithium, Total	mg/L	0.0000163	0.022	0.20	0.186	0.186	0.188	0.17 to 0.23	92.8	70 to 130	0.403	20
AX24175	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.0993	0.0972	0.0982	0.085 to 0.115	99.3	70 to 130	2.12	20
AX24175	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.105	0.102	0.104	0.085 to 0.115	105	70 to 130	2.41	20
AX24175	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.110	0.119	0.115	0.085 to 0.115	110	70 to 130	7.93	20
AX24175	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0973	0.102	0.085 to 0.115	101	70 to 130	3.26	20
AX24175	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.149	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: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24174

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX24175	Solids, Dissolved	mg/L	6.00	25			3.3	48.0	40 to 60			0.00	5

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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
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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: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24175

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/20/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/17/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/17/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/17/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/17/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/17/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/17/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	11/29/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	11/29/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	11/29/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	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: WMWGORLFEB
 Sample Date: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24175

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24175	Boron, Total	mg/L	-0.000152	0.044	1.00	0.940	0.955	0.955	0.85 to 1.15	94.0	70 to 130	1.59	20
AX24175	Thallium, Total	mg/L	0.00000353	0.00044	0.10	0.113	0.111	0.110	0.085 to 0.115	113	70 to 130	1.45	20
AX24175	Mercury, Total by CVAA	mg/L	-0.00000285	0.0005	0.004	0.00372	0.00372	0.00374	0.0034 to 0.0046	93.1	70 to 130	0.0376	20
AX24175	Calcium, Total	mg/L	-0.0183	0.22	5.00	4.82	4.85	4.80	4.25 to 5.75	96.4	70 to 130	0.686	20
AX24175	Chromium, Total	mg/L	0.00000742	0.0044	0.10	0.112	0.111	0.110	0.085 to 0.115	112	70 to 130	1.17	20
AX24175	Lead, Total	mg/L	0.00000876	0.0022	0.10	0.114	0.112	0.111	0.085 to 0.115	114	70 to 130	1.72	20
AX24175	Arsenic, Total	mg/L	0.0000110	0.0022	0.10	0.109	0.108	0.109	0.085 to 0.115	109	70 to 130	0.715	20
AX24175	Barium, Total	mg/L	0.0000177	0.0044	0.10	0.105	0.102	0.104	0.085 to 0.115	105	70 to 130	2.41	20
AX24175	Beryllium, Total	mg/L	0.00	0.00132	0.10	0.110	0.119	0.115	0.085 to 0.115	110	70 to 130	7.93	20
AX24175	Antimony, Total	mg/L	0.0000768	0.00132	0.10	0.101	0.0973	0.102	0.085 to 0.115	101	70 to 130	3.26	20
AX24175	Selenium, Total	mg/L	0.0000729	0.0044	0.10	0.107	0.107	0.108	0.085 to 0.115	107	70 to 130	0.149	20
AX24175	Cadmium, Total	mg/L	0.00000218	0.00066	0.10	0.103	0.103	0.107	0.085 to 0.115	103	70 to 130	0.546	20
AX24175	Cobalt, Total	mg/L	-0.000000392	0.0044	0.10	0.110	0.107	0.107	0.085 to 0.115	110	70 to 130	2.39	20
AX24175	Lithium, Total	mg/L	0.0000163	0.022	0.20	0.186	0.186	0.188	0.17 to 0.23	92.8	70 to 130	0.403	20
AX24175	Molybdenum, Total	mg/L	0.00000539	0.0044	0.10	0.0993	0.0972	0.0982	0.085 to 0.115	99.3	70 to 130	2.12	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

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFEB
 Sample Date: 13-Oct-17
 Customer ID:
 Delivery Date: 13-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24175

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec		
			Limit	Limit			Duplicate	LFB	Limit	Limit		
AX24175	Solids, Dissolved	mg/L	6.00	25			3.3	48.0	40 to 60		0.00	5

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CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 10/13/2017 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): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions"/>
Comments	<input type="text" value="All anions outsourced to Test America, Pensacola"/>

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-20	10/13/2017	09:06	4	Groundwater		AX24165
MW-6	10/13/2017	10:12	4	Groundwater		AX24166
FB-2	10/13/2017	10:02	4	Field Blank		AX24167
MW-7	10/13/2017	11:23	4	Groundwater		AX24168
MW-7 Dup	10/13/2017	11:23	4	Sample Duplicate		AX24169
MW-8	10/13/2017	12:55	4	Groundwater		AX24170

Relinquished By	Received By	Date/Time
		10/13/2017 14:11
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegasouthernco.com, c=US Date: 2017.10.13 20:06:44 -05'00'</small>	10/13/2017 20:00

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="4677-23342-4-1"/>	
Cooler Temp <input type="text" value="0.1 degrees C"/>	
Thermometer ID <input type="text" value="6035-30997-2-2"/>	
	pH Strip ID <input type="text" value="6153-32041-10-8"/>



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 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 (500mL): TDS, Bottle 4 (250mL): Anions		
Comments	All anions outsourced to Test America, Pensacola		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/13/2017	09:24	4	Groundwater		AX24160
MW-14	10/13/2017	10:43	4	Groundwater		AX24161
MW-15	10/13/2017	11:50	4	Groundwater		AX24162
MW-15 DUP	10/13/2017	11:50	4	Sample Duplicate		AX24163
MW-16	10/13/2017	13:03	4	Groundwater		AX24164

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.10.13 19:57:28 -0500</small>	10/13/2017 19:57

SmarTroll ID	5151-26193-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20010-2-2	Cooler Temp
		0.1 degrees C
		Thermometer ID
		6035-30997-2-2
		pH Strip ID
		6153-32041-10-8



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

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 15:30

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 (500mL): Metals, Bottle 2 (250mL): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions"/>		
Comments	<input type="text" value="All anions outsourced to Test America, Pensacola"/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-18	10/13/2017	08:57	4	Groundwater		AX24171
MW-5	10/13/2017	10:21	4	Groundwater		AX24172
MW-19	10/13/2017	13:13	4	Groundwater		AX24173
FB-1	10/13/2017	13:26	4	Field Blank		AX24174
EB-1	10/13/2017	13:30	4	Equipment Blank		AX24175

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.10.13 19:51:35 -0500</small>	10/13/2017 19:51

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="3901-20009-2-1"/>	Cooler Temp
		<input type="text" value="0.1 degrees C"/>
		Thermometer ID
		<input type="text" value="6035-30997-2-2"/>
		pH Strip ID
		<input type="text" value="6153-32041-10-8"/>

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: 400-144729-1

TestAmerica SDG: Plant Gorgas CCB Landfills

Client Project/Site: CCR Plant Gorgas

For:

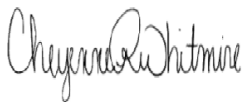
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

10/31/2017 5:17:46 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144729-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144729-1

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373975 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 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24134 MW-8 (400-144729-7) and AX24170 MW-8 (400-144729-27). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 Cl- E: The CCV (35.7416) and CCB (0.4128) closing the bracket on the following samples: AX24164 MW-16 (400-144729-21), AX24165 MW-20 (400-144729-22), AX24166 MW-6 (400-144729-23), AX24167 FB-2 (400-144729-24), AX24168 MW-7 (400-144729-25), AX24169 MW-7 DUP (400-144729-26), AX24170 MW-8 (400-144729-27), AX24171 MW-18 (400-144729-28), AX24172 MW-5 (400-144729-29) and AX24173 MW-19 (400-144729-30) did not transfer to TALS properly, but is reflected on the raw data sheet attached to batch 372717.

Method(s) SM 4500 Cl- E: The method blank for analytical batch 372717 contained Chloride. This target analyte concentration was less than the method detection limit (MDL) and reporting limit (RL); therefore, re-analysis of samples was not performed.

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 372717 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.

Method(s) SM 4500 SO4 E: The method blank for analytical batch 372359 contained Sulfate below the method detection limit and at concentration less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24128 MW-13 (400-144729-1), AX24129 MW-14 (400-144729-2), AX24130 MW-15 (400-144729-3), AX24130 MW-15 (400-144729-3[MS]), AX24130 MW-15 (400-144729-3[MSD]), AX24131 MW-16 (400-144729-4), AX24132 MW-16 DUP (400-144729-5), AX24133 MW-19 (400-144729-6), AX24134 MW-8 (400-144729-7), AX24135 MW-20 (400-144729-8), AX24136 MW-7 (400-144729-9), AX24139 MW-6 (400-144729-12), AX24139 MW-6 (400-144729-12[MS]), AX24139 MW-6 (400-144729-12[MSD]), AX24140 MW-5 (400-144729-13), AX24141 MW-18 (400-144729-14), AX24142 MW-6 DUP (400-144729-15), AX24143 FB-1 (400-144729-16), AX24160 MW-13 (400-144729-17), AX24161 MW-14 (400-144729-18), AX24162 MW-15 (400-144729-19), AX24162 MW-15 (400-144729-19[MS]), AX24162 MW-15 (400-144729-19[MSD]), AX24163 MW-15 DUP (400-144729-20), AX24164 MW-16 (400-144729-21), AX24165 MW-20 (400-144729-22), AX24166 MW-6 (400-144729-23), AX24167 FB-2 (400-144729-24), AX24168 MW-7 (400-144729-25), AX24169 MW-7 DUP (400-144729-26), AX24170 MW-8 (400-144729-27), AX24171 MW-18 (400-144729-28), AX24172 MW-5 (400-144729-29), AX24173 MW-19 (400-144729-30), AX24173 MW-19 (400-144729-30[MS]) and AX24173 MW-19 (400-144729-30[MSD]). AX24174 FB-1 (400-144729-31) and AX24175 EB-1 (400-144729-32). 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 372654 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.

Detection Summary

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24128 MW-13

Lab Sample ID: 400-144729-1

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	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2100		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24129 MW-14

Lab Sample ID: 400-144729-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.2		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	1900		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24130 MW-15

Lab Sample ID: 400-144729-3

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
Fluoride	0.37		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1600		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24131 MW-16

Lab Sample ID: 400-144729-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24132 MW-16 DUP

Lab Sample ID: 400-144729-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.5		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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24133 MW-19

Lab Sample ID: 400-144729-6

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	0.34		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24134 MW-8

Lab Sample ID: 400-144729-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	150		20	6.0	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24135 MW-20

Lab Sample ID: 400-144729-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.6		2.0	0.60	mg/L	1		SM 4500 Cl- 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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24135 MW-20 (Continued)

Lab Sample ID: 400-144729-8

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
Sulfate	1600		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24136 MW-7

Lab Sample ID: 400-144729-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	31		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	1400		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24137 FB-2

Lab Sample ID: 400-144729-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	4.5	J B	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24138 EB-1

Lab Sample ID: 400-144729-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2.3	J B	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24139 MW-6

Lab Sample ID: 400-144729-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		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	2000		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24140 MW-5

Lab Sample ID: 400-144729-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.9		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	2300		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24141 MW-18

Lab Sample ID: 400-144729-14

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
Fluoride	0.31		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2000		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24142 MW-6 DUP

Lab Sample ID: 400-144729-15

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	0.14		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1900		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24143 FB-1

Lab Sample ID: 400-144729-16

No Detections.

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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24160 MW-13

Lab Sample ID: 400-144729-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		2.0	0.60	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	2000		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24161 MW-14

Lab Sample ID: 400-144729-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24162 MW-15

Lab Sample ID: 400-144729-19

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
Fluoride	0.36		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1600	F1 F2	350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24163 MW-15 DUP

Lab Sample ID: 400-144729-20

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	0.36		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1500		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24164 MW-16

Lab Sample ID: 400-144729-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.3	B	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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24165 MW-20

Lab Sample ID: 400-144729-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.0	B	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	1600		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24166 MW-6

Lab Sample ID: 400-144729-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.0	B	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	2000		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24167 FB-2

Lab Sample ID: 400-144729-24

No Detections.

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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24168 MW-7

Lab Sample ID: 400-144729-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32	B	2.0	0.60	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	1400		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24169 MW-7 DUP

Lab Sample ID: 400-144729-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32	B	2.0	0.60	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	1400		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24170 MW-8

Lab Sample ID: 400-144729-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	130	B	10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.23		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1600		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24171 MW-18

Lab Sample ID: 400-144729-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3	B	2.0	0.60	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	1900		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24172 MW-5

Lab Sample ID: 400-144729-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.0	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.36		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24173 MW-19

Lab Sample ID: 400-144729-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.6	B F2	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.34		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2200		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24174 FB-1

Lab Sample ID: 400-144729-31

No Detections.

Client Sample ID: AX24175 EB-1

Lab Sample ID: 400-144729-32

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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144729-1	AX24128 MW-13	Water	10/12/17 09:35	10/17/17 10:20
400-144729-2	AX24129 MW-14	Water	10/12/17 10:45	10/17/17 10:20
400-144729-3	AX24130 MW-15	Water	10/12/17 12:00	10/17/17 10:20
400-144729-4	AX24131 MW-16	Water	10/12/17 13:09	10/17/17 10:20
400-144729-5	AX24132 MW-16 DUP	Water	10/12/17 13:09	10/17/17 10:20
400-144729-6	AX24133 MW-19	Water	10/12/17 14:30	10/17/17 10:20
400-144729-7	AX24134 MW-8	Water	10/12/17 16:19	10/17/17 10:20
400-144729-8	AX24135 MW-20	Water	10/12/17 14:58	10/17/17 10:20
400-144729-9	AX24136 MW-7	Water	10/12/17 15:57	10/17/17 10:20
400-144729-10	AX24137 FB-2	Water	10/12/17 16:18	10/17/17 10:20
400-144729-11	AX24138 EB-1	Water	10/12/17 16:45	10/17/17 10:20
400-144729-12	AX24139 MW-6	Water	10/12/17 12:42	10/17/17 10:20
400-144729-13	AX24140 MW-5	Water	10/12/17 16:16	10/17/17 10:20
400-144729-14	AX24141 MW-18	Water	10/12/17 17:37	10/17/17 10:20
400-144729-15	AX24142 MW-6 DUP	Water	10/12/17 12:42	10/17/17 10:20
400-144729-16	AX24143 FB-1	Water	10/12/17 15:19	10/17/17 10:20
400-144729-17	AX24160 MW-13	Water	10/13/17 09:24	10/17/17 10:20
400-144729-18	AX24161 MW-14	Water	10/13/17 10:43	10/17/17 10:20
400-144729-19	AX24162 MW-15	Water	10/13/17 11:50	10/17/17 10:20
400-144729-20	AX24163 MW-15 DUP	Water	10/13/17 11:50	10/17/17 10:20
400-144729-21	AX24164 MW-16	Water	10/13/17 13:03	10/17/17 10:20
400-144729-22	AX24165 MW-20	Water	10/13/17 09:06	10/17/17 10:20
400-144729-23	AX24166 MW-6	Water	10/13/17 10:12	10/17/17 10:20
400-144729-24	AX24167 FB-2	Water	10/13/17 10:02	10/17/17 10:20
400-144729-25	AX24168 MW-7	Water	10/13/17 11:23	10/17/17 10:20
400-144729-26	AX24169 MW-7 DUP	Water	10/13/17 11:23	10/17/17 10:20
400-144729-27	AX24170 MW-8	Water	10/13/17 12:55	10/17/17 10:20
400-144729-28	AX24171 MW-18	Water	10/13/17 08:57	10/17/17 10:20
400-144729-29	AX24172 MW-5	Water	10/13/17 10:21	10/17/17 10:20
400-144729-30	AX24173 MW-19	Water	10/13/17 13:13	10/17/17 10:20
400-144729-31	AX24174 FB-1	Water	10/13/17 13:26	10/17/17 10:20
400-144729-32	AX24175 EB-1	Water	10/13/17 13:30	10/17/17 10:20

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24128 MW-13

Lab Sample ID: 400-144729-1

Date Collected: 10/12/17 09:35

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.22		0.10	0.032	mg/L			10/30/17 16:02	1
Sulfate	2100		350	98	mg/L			10/20/17 08:39	70

Client Sample ID: AX24129 MW-14

Lab Sample ID: 400-144729-2

Date Collected: 10/12/17 10:45

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.2		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.26		0.10	0.032	mg/L			10/30/17 16:04	1
Sulfate	1900		350	98	mg/L			10/20/17 08:39	70

Client Sample ID: AX24130 MW-15

Lab Sample ID: 400-144729-3

Date Collected: 10/12/17 12:00

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.37		0.10	0.032	mg/L			10/31/17 11:57	1
Sulfate	1600		350	98	mg/L			10/20/17 08:39	70

Client Sample ID: AX24131 MW-16

Lab Sample ID: 400-144729-4

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.18		0.10	0.032	mg/L			10/30/17 13:48	1
Sulfate	1300		300	84	mg/L			10/20/17 08:39	60

Client Sample ID: AX24132 MW-16 DUP

Lab Sample ID: 400-144729-5

Date Collected: 10/12/17 13:09

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.5		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.18		0.10	0.032	mg/L			10/30/17 13:50	1
Sulfate	1300		300	84	mg/L			10/20/17 08:43	60

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24133 MW-19

Lab Sample ID: 400-144729-6

Date Collected: 10/12/17 14:30

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.9		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.34		0.10	0.032	mg/L			10/30/17 15:01	1
Sulfate	2300		350	98	mg/L			10/20/17 08:43	70

Client Sample ID: AX24134 MW-8

Lab Sample ID: 400-144729-7

Date Collected: 10/12/17 16:19

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		20	6.0	mg/L			10/20/17 14:09	10
Fluoride	0.22		0.10	0.032	mg/L			10/30/17 15:03	1
Sulfate	1400		250	70	mg/L			10/20/17 08:44	50

Client Sample ID: AX24135 MW-20

Lab Sample ID: 400-144729-8

Date Collected: 10/12/17 14:58

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.6		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.12		0.10	0.032	mg/L			10/30/17 16:09	1
Sulfate	1600		250	70	mg/L			10/20/17 08:44	50

Client Sample ID: AX24136 MW-7

Lab Sample ID: 400-144729-9

Date Collected: 10/12/17 15:57

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.17		0.10	0.032	mg/L			10/30/17 16:11	1
Sulfate	1400		250	70	mg/L			10/20/17 08:47	50

Client Sample ID: AX24137 FB-2

Lab Sample ID: 400-144729-10

Date Collected: 10/12/17 16:18

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 14:09	1
Fluoride	<0.032		0.10	0.032	mg/L			10/30/17 16:13	1
Sulfate	4.5	J B	5.0	1.4	mg/L			10/18/17 09:13	1

Client Sample ID: AX24138 EB-1

Lab Sample ID: 400-144729-11

Date Collected: 10/12/17 16:45

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 14:12	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24138 EB-1

Lab Sample ID: 400-144729-11

Date Collected: 10/12/17 16:45

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			10/30/17 16:20	1
Sulfate	2.3	J B	5.0	1.4	mg/L			10/18/17 09:13	1

Client Sample ID: AX24139 MW-6

Lab Sample ID: 400-144729-12

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.4		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.15		0.10	0.032	mg/L			10/31/17 13:08	1
Sulfate	2000		350	98	mg/L			10/20/17 08:47	70

Client Sample ID: AX24140 MW-5

Lab Sample ID: 400-144729-13

Date Collected: 10/12/17 16:16

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.9		2.0	0.60	mg/L			10/20/17 15:08	1
Fluoride	0.35		0.10	0.032	mg/L			10/30/17 16:25	1
Sulfate	2300		350	98	mg/L			10/20/17 10:02	70

Client Sample ID: AX24141 MW-18

Lab Sample ID: 400-144729-14

Date Collected: 10/12/17 17:37

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/20/17 15:09	1
Fluoride	0.31		0.10	0.032	mg/L			10/30/17 16:27	1
Sulfate	2000		350	98	mg/L			10/20/17 10:02	70

Client Sample ID: AX24142 MW-6 DUP

Lab Sample ID: 400-144729-15

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.0		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.14		0.10	0.032	mg/L			10/30/17 16:29	1
Sulfate	1900		350	98	mg/L			10/20/17 10:34	70

Client Sample ID: AX24143 FB-1

Lab Sample ID: 400-144729-16

Date Collected: 10/12/17 15:19

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	<0.032		0.10	0.032	mg/L			10/30/17 16:32	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24143 FB-1

Lab Sample ID: 400-144729-16

Date Collected: 10/12/17 15:19

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 10:29	1

Client Sample ID: AX24160 MW-13

Lab Sample ID: 400-144729-17

Date Collected: 10/13/17 09:24

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.20		0.10	0.032	mg/L			10/30/17 16:34	1
Sulfate	2000		350	98	mg/L			10/20/17 10:34	70

Client Sample ID: AX24161 MW-14

Lab Sample ID: 400-144729-18

Date Collected: 10/13/17 10:43

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.2		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.25		0.10	0.032	mg/L			10/30/17 16:36	1
Sulfate	1800		350	98	mg/L			10/20/17 10:34	70

Client Sample ID: AX24162 MW-15

Lab Sample ID: 400-144729-19

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.36		0.10	0.032	mg/L			10/31/17 14:14	1
Sulfate	1600	F1 F2	350	98	mg/L			10/20/17 10:34	70

Client Sample ID: AX24163 MW-15 DUP

Lab Sample ID: 400-144729-20

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			10/20/17 15:22	1
Fluoride	0.36		0.10	0.032	mg/L			10/31/17 12:14	1
Sulfate	1500		350	98	mg/L			10/20/17 10:36	70

Client Sample ID: AX24164 MW-16

Lab Sample ID: 400-144729-21

Date Collected: 10/13/17 13:03

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.3	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.17		0.10	0.032	mg/L			10/30/17 16:06	1
Sulfate	1300		300	84	mg/L			10/20/17 13:15	60

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24165 MW-20

Lab Sample ID: 400-144729-22

Date Collected: 10/13/17 09:06

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.0	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.13		0.10	0.032	mg/L			10/30/17 16:38	1
Sulfate	1600		350	98	mg/L			10/20/17 13:15	70

Client Sample ID: AX24166 MW-6

Lab Sample ID: 400-144729-23

Date Collected: 10/13/17 10:12

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.0	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.15		0.10	0.032	mg/L			10/31/17 12:17	1
Sulfate	2000		350	98	mg/L			10/20/17 13:15	70

Client Sample ID: AX24167 FB-2

Lab Sample ID: 400-144729-24

Date Collected: 10/13/17 10:02

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 12:19	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 12:57	1

Client Sample ID: AX24168 MW-7

Lab Sample ID: 400-144729-25

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.19		0.10	0.032	mg/L			10/31/17 12:27	1
Sulfate	1400		350	98	mg/L			10/20/17 13:15	70

Client Sample ID: AX24169 MW-7 DUP

Lab Sample ID: 400-144729-26

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.19		0.10	0.032	mg/L			10/31/17 12:31	1
Sulfate	1400		300	84	mg/L			10/20/17 13:20	60

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24170 MW-8

Lab Sample ID: 400-144729-27

Date Collected: 10/13/17 12:55

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130	B	10	3.0	mg/L			10/20/17 16:02	5
Fluoride	0.23		0.10	0.032	mg/L			10/31/17 12:34	1
Sulfate	1600		350	98	mg/L			10/20/17 13:20	70

Client Sample ID: AX24171 MW-18

Lab Sample ID: 400-144729-28

Date Collected: 10/13/17 08:57

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.32		0.10	0.032	mg/L			10/31/17 12:36	1
Sulfate	1900		350	98	mg/L			10/20/17 13:20	70

Client Sample ID: AX24172 MW-5

Lab Sample ID: 400-144729-29

Date Collected: 10/13/17 10:21

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.0	B	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.36		0.10	0.032	mg/L			10/31/17 12:38	1
Sulfate	2300		350	98	mg/L			10/20/17 13:20	70

Client Sample ID: AX24173 MW-19

Lab Sample ID: 400-144729-30

Date Collected: 10/13/17 13:13

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.6	B F2	2.0	0.60	mg/L			10/20/17 15:49	1
Fluoride	0.34		0.10	0.032	mg/L			10/31/17 14:41	1
Sulfate	2200		350	98	mg/L			10/20/17 13:22	70

Client Sample ID: AX24174 FB-1

Lab Sample ID: 400-144729-31

Date Collected: 10/13/17 13:26

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 15:52	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 12:41	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 12:57	1

Client Sample ID: AX24175 EB-1

Lab Sample ID: 400-144729-32

Date Collected: 10/13/17 13:30

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/20/17 15:52	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24175 EB-1

Lab Sample ID: 400-144729-32

Date Collected: 10/13/17 13:30

Matrix: Water

Date Received: 10/17/17 10:20

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 12:43	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 12:57	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Definitions/Glossary

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Qualifiers

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24128 MW-13

Date Collected: 10/12/17 09:35

Date Received: 10/17/17 10:20

Lab Sample ID: 400-144729-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:39	JLB	TAL PEN

Client Sample ID: AX24129 MW-14

Date Collected: 10/12/17 10:45

Date Received: 10/17/17 10:20

Lab Sample ID: 400-144729-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:04	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:39	JLB	TAL PEN

Client Sample ID: AX24130 MW-15

Date Collected: 10/12/17 12:00

Date Received: 10/17/17 10:20

Lab Sample ID: 400-144729-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 11:57	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:39	JLB	TAL PEN

Client Sample ID: AX24131 MW-16

Date Collected: 10/12/17 13:09

Date Received: 10/17/17 10:20

Lab Sample ID: 400-144729-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373938	10/30/17 13:48	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	372654	10/20/17 08:39	JLB	TAL PEN

Client Sample ID: AX24132 MW-16 DUP

Date Collected: 10/12/17 13:09

Date Received: 10/17/17 10:20

Lab Sample ID: 400-144729-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373938	10/30/17 13:50	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	372654	10/20/17 08:43	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24133 MW-19

Lab Sample ID: 400-144729-6

Date Collected: 10/12/17 14:30

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373952	10/30/17 15:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:43	JLB	TAL PEN

Client Sample ID: AX24134 MW-8

Lab Sample ID: 400-144729-7

Date Collected: 10/12/17 16:19

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		10	372713	10/20/17 14:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373952	10/30/17 15:03	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	372654	10/20/17 08:44	JLB	TAL PEN

Client Sample ID: AX24135 MW-20

Lab Sample ID: 400-144729-8

Date Collected: 10/12/17 14:58

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:09	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	372654	10/20/17 08:44	JLB	TAL PEN

Client Sample ID: AX24136 MW-7

Lab Sample ID: 400-144729-9

Date Collected: 10/12/17 15:57

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	372654	10/20/17 08:47	JLB	TAL PEN

Client Sample ID: AX24137 FB-2

Lab Sample ID: 400-144729-10

Date Collected: 10/12/17 16:18

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 14:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:13	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372359	10/18/17 09:13	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24138 EB-1

Lab Sample ID: 400-144729-11

Date Collected: 10/12/17 16:45

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 14:12	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:20	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372359	10/18/17 09:13	JLB	TAL PEN

Client Sample ID: AX24139 MW-6

Lab Sample ID: 400-144729-12

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:08	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 08:47	JLB	TAL PEN

Client Sample ID: AX24140 MW-5

Lab Sample ID: 400-144729-13

Date Collected: 10/12/17 16:16

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:08	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:02	JLB	TAL PEN

Client Sample ID: AX24141 MW-18

Lab Sample ID: 400-144729-14

Date Collected: 10/12/17 17:37

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:02	JLB	TAL PEN

Client Sample ID: AX24142 MW-6 DUP

Lab Sample ID: 400-144729-15

Date Collected: 10/12/17 12:42

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:29	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:34	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24143 FB-1

Lab Sample ID: 400-144729-16

Date Collected: 10/12/17 15:19

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:32	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372654	10/20/17 10:29	JLB	TAL PEN

Client Sample ID: AX24160 MW-13

Lab Sample ID: 400-144729-17

Date Collected: 10/13/17 09:24

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:34	JLB	TAL PEN

Client Sample ID: AX24161 MW-14

Lab Sample ID: 400-144729-18

Date Collected: 10/13/17 10:43

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:34	JLB	TAL PEN

Client Sample ID: AX24162 MW-15

Lab Sample ID: 400-144729-19

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:34	JLB	TAL PEN

Client Sample ID: AX24163 MW-15 DUP

Lab Sample ID: 400-144729-20

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372713	10/20/17 15:22	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372654	10/20/17 10:36	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24164 MW-16

Lab Sample ID: 400-144729-21

Date Collected: 10/13/17 13:03

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	372685	10/20/17 13:15	JLB	TAL PEN

Client Sample ID: AX24165 MW-20

Lab Sample ID: 400-144729-22

Date Collected: 10/13/17 09:06

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	373975	10/30/17 16:38	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:15	JLB	TAL PEN

Client Sample ID: AX24166 MW-6

Lab Sample ID: 400-144729-23

Date Collected: 10/13/17 10:12

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:17	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:15	JLB	TAL PEN

Client Sample ID: AX24167 FB-2

Lab Sample ID: 400-144729-24

Date Collected: 10/13/17 10:02

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:19	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 12:57	JLB	TAL PEN

Client Sample ID: AX24168 MW-7

Lab Sample ID: 400-144729-25

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:15	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24169 MW-7 DUP

Lab Sample ID: 400-144729-26

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:31	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	372685	10/20/17 13:20	JLB	TAL PEN

Client Sample ID: AX24170 MW-8

Lab Sample ID: 400-144729-27

Date Collected: 10/13/17 12:55

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		5	372717	10/20/17 16:02	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:20	JLB	TAL PEN

Client Sample ID: AX24171 MW-18

Lab Sample ID: 400-144729-28

Date Collected: 10/13/17 08:57

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:20	JLB	TAL PEN

Client Sample ID: AX24172 MW-5

Lab Sample ID: 400-144729-29

Date Collected: 10/13/17 10:21

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:38	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:20	JLB	TAL PEN

Client Sample ID: AX24173 MW-19

Lab Sample ID: 400-144729-30

Date Collected: 10/13/17 13:13

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:49	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:41	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	372685	10/20/17 13:22	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144729-1
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24174 FB-1

Lab Sample ID: 400-144729-31

Date Collected: 10/13/17 13:26

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:52	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:41	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 12:57	JLB	TAL PEN

Client Sample ID: AX24175 EB-1

Lab Sample ID: 400-144729-32

Date Collected: 10/13/17 13:30

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	372717	10/20/17 15:52	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 12:57	JLB	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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

General Chemistry

Analysis Batch: 372359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-10	AX24137 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-144729-11	AX24138 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-372359/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-372359/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-372359/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 372654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-1	AX24128 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-144729-2	AX24129 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-144729-3	AX24130 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-4	AX24131 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-144729-5	AX24132 MW-16 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144729-6	AX24133 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-144729-7	AX24134 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-144729-8	AX24135 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144729-9	AX24136 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-144729-12	AX24139 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144729-13	AX24140 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-144729-14	AX24141 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-144729-15	AX24142 MW-6 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144729-16	AX24143 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-144729-17	AX24160 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-144729-18	AX24161 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-144729-19	AX24162 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-20	AX24163 MW-15 DUP	Total/NA	Water	SM 4500 SO4 E	
MB 400-372654/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-372654/13	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-372654/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144729-3 MS	AX24130 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-3 MSD	AX24130 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-12 MS	AX24139 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144729-12 MSD	AX24139 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144729-19 MS	AX24162 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144729-19 MSD	AX24162 MW-15	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 372685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-21	AX24164 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-144729-22	AX24165 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144729-23	AX24166 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144729-24	AX24167 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-144729-25	AX24168 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-144729-26	AX24169 MW-7 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144729-27	AX24170 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-144729-28	AX24171 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-144729-29	AX24172 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-144729-30	AX24173 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-144729-31	AX24174 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-144729-32	AX24175 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-372685/6	Method Blank	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: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 372685 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-372685/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-372685/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144729-30 MS	AX24173 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-144729-30 MSD	AX24173 MW-19	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 372713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-1	AX24128 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-144729-2	AX24129 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-144729-3	AX24130 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-4	AX24131 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-144729-5	AX24132 MW-16 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144729-6	AX24133 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144729-7	AX24134 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-144729-8	AX24135 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144729-9	AX24136 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-144729-10	AX24137 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-144729-11	AX24138 EB-1	Total/NA	Water	SM 4500 Cl- E	
400-144729-12	AX24139 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144729-13	AX24140 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-144729-14	AX24141 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-144729-15	AX24142 MW-6 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144729-16	AX24143 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-144729-17	AX24160 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-144729-18	AX24161 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-144729-19	AX24162 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-20	AX24163 MW-15 DUP	Total/NA	Water	SM 4500 Cl- E	
MB 400-372713/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-372713/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-372713/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144729-3 MS	AX24130 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-3 MSD	AX24130 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-12 MS	AX24139 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144729-12 MSD	AX24139 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144729-19 MS	AX24162 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144729-19 MSD	AX24162 MW-15	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 372717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-21	AX24164 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-144729-22	AX24165 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144729-23	AX24166 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144729-24	AX24167 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-144729-25	AX24168 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-144729-26	AX24169 MW-7 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144729-27	AX24170 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-144729-28	AX24171 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-144729-29	AX24172 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-144729-30	AX24173 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144729-31	AX24174 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-144729-32	AX24175 EB-1	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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 372717 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-372717/20	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-372717/21	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-372717/17	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144729-30 MS	AX24173 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144729-30 MSD	AX24173 MW-19	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 373938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-4	AX24131 MW-16	Total/NA	Water	SM 4500 F C	
400-144729-5	AX24132 MW-16 DUP	Total/NA	Water	SM 4500 F C	
MB 400-373938/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-373938/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-83271-C-13 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-83271-C-13 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
660-83312-C-9 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 373952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-6	AX24133 MW-19	Total/NA	Water	SM 4500 F C	
400-144729-7	AX24134 MW-8	Total/NA	Water	SM 4500 F C	
MB 400-373952/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-373952/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144674-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144674-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
660-83348-D-5 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 373975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-1	AX24128 MW-13	Total/NA	Water	SM 4500 F C	
400-144729-2	AX24129 MW-14	Total/NA	Water	SM 4500 F C	
400-144729-8	AX24135 MW-20	Total/NA	Water	SM 4500 F C	
400-144729-9	AX24136 MW-7	Total/NA	Water	SM 4500 F C	
400-144729-10	AX24137 FB-2	Total/NA	Water	SM 4500 F C	
400-144729-11	AX24138 EB-1	Total/NA	Water	SM 4500 F C	
400-144729-13	AX24140 MW-5	Total/NA	Water	SM 4500 F C	
400-144729-14	AX24141 MW-18	Total/NA	Water	SM 4500 F C	
400-144729-15	AX24142 MW-6 DUP	Total/NA	Water	SM 4500 F C	
400-144729-16	AX24143 FB-1	Total/NA	Water	SM 4500 F C	
400-144729-17	AX24160 MW-13	Total/NA	Water	SM 4500 F C	
400-144729-18	AX24161 MW-14	Total/NA	Water	SM 4500 F C	
400-144729-21	AX24164 MW-16	Total/NA	Water	SM 4500 F C	
400-144729-22	AX24165 MW-20	Total/NA	Water	SM 4500 F C	
MB 400-373975/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-373975/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-83348-C-3 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-83348-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-144729-11 DU	AX24138 EB-1	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-3	AX24130 MW-15	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: 400-144729-1
SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 374086 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-20	AX24163 MW-15 DUP	Total/NA	Water	SM 4500 F C	
400-144729-23	AX24166 MW-6	Total/NA	Water	SM 4500 F C	
400-144729-24	AX24167 FB-2	Total/NA	Water	SM 4500 F C	
400-144729-25	AX24168 MW-7	Total/NA	Water	SM 4500 F C	
400-144729-26	AX24169 MW-7 DUP	Total/NA	Water	SM 4500 F C	
400-144729-27	AX24170 MW-8	Total/NA	Water	SM 4500 F C	
400-144729-28	AX24171 MW-18	Total/NA	Water	SM 4500 F C	
400-144729-29	AX24172 MW-5	Total/NA	Water	SM 4500 F C	
400-144729-31	AX24174 FB-1	Total/NA	Water	SM 4500 F C	
400-144729-32	AX24175 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-374086/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374086/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-3 MS	AX24130 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-3 MSD	AX24130 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-25 DU	AX24168 MW-7	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-12	AX24139 MW-6	Total/NA	Water	SM 4500 F C	
MB 400-374103/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374103/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-12 MS	AX24139 MW-6	Total/NA	Water	SM 4500 F C	
400-144729-12 MSD	AX24139 MW-6	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144729-19	AX24162 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-30	AX24173 MW-19	Total/NA	Water	SM 4500 F C	
MB 400-374123/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374123/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-19 MS	AX24162 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-19 MSD	AX24162 MW-15	Total/NA	Water	SM 4500 F C	
400-144729-30 MS	AX24173 MW-19	Total/NA	Water	SM 4500 F C	
400-144729-30 MSD	AX24173 MW-19	Total/NA	Water	SM 4500 F C	

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-372713/6
Matrix: Water
Analysis Batch: 372713

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			10/20/17 13:41	1

Lab Sample ID: LCS 400-372713/7
Matrix: Water
Analysis Batch: 372713

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	30.2		mg/L		101	90 - 110

Lab Sample ID: MRL 400-372713/3
Matrix: Water
Analysis Batch: 372713

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	2.21		mg/L		110	50 - 150

Lab Sample ID: 400-144729-3 MS
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.8	J	10.0	12.5		mg/L		106	73 - 120

Lab Sample ID: 400-144729-3 MSD
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.8	J	10.0	12.6		mg/L		107	73 - 120	1	8

Lab Sample ID: 400-144729-12 MS
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24139 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.4		10.0	14.0		mg/L		106	73 - 120

Lab Sample ID: 400-144729-12 MSD
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24139 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
Chloride	3.4		10.0	13.9		mg/L		104	73 - 120	1	8

Lab Sample ID: 400-144729-19 MS
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.8	J	10.0	12.0		mg/L		102	73 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144729-19 MSD
Matrix: Water
Analysis Batch: 372713

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.8	J	10.0	12.1		mg/L		102	73 - 120	0	8

Lab Sample ID: MB 400-372717/20
Matrix: Water
Analysis Batch: 372717

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.855	J	2.0	0.60	mg/L			10/20/17 15:52	1

Lab Sample ID: LCS 400-372717/21
Matrix: Water
Analysis Batch: 372717

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	31.2		mg/L		104	90 - 110

Lab Sample ID: MRL 400-372717/17
Matrix: Water
Analysis Batch: 372717

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	2.50		mg/L		125	50 - 150

Lab Sample ID: 400-144729-30 MS
Matrix: Water
Analysis Batch: 372717

Client Sample ID: AX24173 MW-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.6	B F2	10.0	11.3		mg/L		87	73 - 120

Lab Sample ID: 400-144729-30 MSD
Matrix: Water
Analysis Batch: 372717

Client Sample ID: AX24173 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
Chloride	2.6	B F2	10.0	12.9	F2	mg/L		103	73 - 120	13	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-373938/3
Matrix: Water
Analysis Batch: 373938

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			10/30/17 13:23	1

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 400-373938/4
Matrix: Water
Analysis Batch: 373938

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	3.82		mg/L		96	90 - 110

Lab Sample ID: 660-83271-C-13 MS
Matrix: Water
Analysis Batch: 373938

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
Fluoride	0.13		1.00	1.14		mg/L		101	75 - 125

Lab Sample ID: 660-83271-C-13 MSD
Matrix: Water
Analysis Batch: 373938

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
Fluoride	0.13		1.00	1.12		mg/L		99	75 - 125	2	4

Lab Sample ID: 660-83312-C-9 DU
Matrix: Water
Analysis Batch: 373938

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.36			0.360		mg/L				0	4

Lab Sample ID: MB 400-373952/3
Matrix: Water
Analysis Batch: 373952

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			10/30/17 14:36	1

Lab Sample ID: LCS 400-373952/4
Matrix: Water
Analysis Batch: 373952

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	3.82		mg/L		96	90 - 110

Lab Sample ID: 400-144674-A-1 MS
Matrix: Water
Analysis Batch: 373952

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
Fluoride	0.58		1.00	1.65		mg/L		107	75 - 125

Lab Sample ID: 400-144674-A-1 MSD
Matrix: Water
Analysis Batch: 373952

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
Fluoride	0.58		1.00	1.62		mg/L		104	75 - 125	2	4

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 660-83348-D-5 DU
Matrix: Water
Analysis Batch: 373952

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Fluoride	1.1		1.12		mg/L		0	4

Lab Sample ID: MB 400-373975/3
Matrix: Water
Analysis Batch: 373975

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			10/30/17 15:44	1

Lab Sample ID: LCS 400-373975/4
Matrix: Water
Analysis Batch: 373975

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: 660-83348-C-3 MS
Matrix: Water
Analysis Batch: 373975

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
Fluoride	0.18	F1	1.00	0.720	F1	mg/L		54	75 - 125

Lab Sample ID: 660-83348-C-3 MSD
Matrix: Water
Analysis Batch: 373975

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
Fluoride	0.18	F1	1.00	0.710	F1	mg/L		53	75 - 125	1	4

Lab Sample ID: 400-144729-11 DU
Matrix: Water
Analysis Batch: 373975

Client Sample ID: AX24138 EB-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

Lab Sample ID: MB 400-374086/3
Matrix: Water
Analysis Batch: 374086

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			10/31/17 11:49	1

Lab Sample ID: LCS 400-374086/4
Matrix: Water
Analysis Batch: 374086

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	3.82		mg/L		96	90 - 110

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-144729-3 MS
Matrix: Water
Analysis Batch: 374086

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.37		1.00	1.36		mg/L		99	75 - 125

Lab Sample ID: 400-144729-3 MSD
Matrix: Water
Analysis Batch: 374086

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.37		1.00	1.33		mg/L		96	75 - 125	2	4

Lab Sample ID: 400-144729-25 DU
Matrix: Water
Analysis Batch: 374086

Client Sample ID: AX24168 MW-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.19		0.190		mg/L		0	4

Lab Sample ID: MB 400-374103/3
Matrix: Water
Analysis Batch: 374103

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			10/31/17 13:00	1

Lab Sample ID: LCS 400-374103/4
Matrix: Water
Analysis Batch: 374103

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	3.82		mg/L		96	90 - 110

Lab Sample ID: 400-144729-12 MS
Matrix: Water
Analysis Batch: 374103

Client Sample ID: AX24139 MW-6
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	1.12		mg/L		97	75 - 125

Lab Sample ID: 400-144729-12 MSD
Matrix: Water
Analysis Batch: 374103

Client Sample ID: AX24139 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	0.15		1.00	1.12		mg/L		97	75 - 125	0	4

Lab Sample ID: MB 400-374123/3
Matrix: Water
Analysis Batch: 374123

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			10/31/17 14:06	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: LCS 400-374123/4
Matrix: Water
Analysis Batch: 374123

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: 400-144729-19 MS
Matrix: Water
Analysis Batch: 374123

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.36		1.00	1.33		mg/L		97	75 - 125

Lab Sample ID: 400-144729-19 MSD
Matrix: Water
Analysis Batch: 374123

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.36		1.00	1.33		mg/L		97	75 - 125	0	4

Lab Sample ID: 400-144729-30 MS
Matrix: Water
Analysis Batch: 374123

Client Sample ID: AX24173 MW-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.34		1.00	1.28		mg/L		94	75 - 125

Lab Sample ID: 400-144729-30 MSD
Matrix: Water
Analysis Batch: 374123

Client Sample ID: AX24173 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	0.34		1.00	1.26		mg/L		92	75 - 125	2	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-372359/6
Matrix: Water
Analysis Batch: 372359

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.77	J	5.0	1.4	mg/L			10/18/17 08:39	1

Lab Sample ID: LCS 400-372359/7
Matrix: Water
Analysis Batch: 372359

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	13.8		mg/L		92	90 - 110

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-372359/3
Matrix: Water
Analysis Batch: 372359

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	5.13		mg/L		103	50 - 150

Lab Sample ID: MB 400-372654/6
Matrix: Water
Analysis Batch: 372654

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			10/20/17 07:37	1

Lab Sample ID: LCS 400-372654/13
Matrix: Water
Analysis Batch: 372654

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	14.0		mg/L		93	90 - 110

Lab Sample ID: MRL 400-372654/3
Matrix: Water
Analysis Batch: 372654

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	4.14	J	mg/L		83	50 - 150

Lab Sample ID: 400-144729-3 MS
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1600		700	2210		mg/L		92	77 - 128

Lab Sample ID: 400-144729-3 MSD
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24130 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1600		700	2250		mg/L		98	77 - 128	2	5

Lab Sample ID: 400-144729-12 MS
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24139 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2000		700	2550		mg/L		80	77 - 128

Lab Sample ID: 400-144729-12 MSD
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24139 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
Sulfate	2000		700	2660		mg/L		96	77 - 128	4	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144729-19 MS
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1600	F1 F2	700	2290		mg/L		101	77 - 128

Lab Sample ID: 400-144729-19 MSD
Matrix: Water
Analysis Batch: 372654

Client Sample ID: AX24162 MW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfate	1600	F1 F2	700	2860	F1 F2	mg/L		183	77 - 128	22	5

Lab Sample ID: MB 400-372685/6
Matrix: Water
Analysis Batch: 372685

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			10/20/17 11:15	1

Lab Sample ID: LCS 400-372685/7
Matrix: Water
Analysis Batch: 372685

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	13.6		mg/L		90	90 - 110

Lab Sample ID: MRL 400-372685/3
Matrix: Water
Analysis Batch: 372685

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	3.84	J	mg/L		77	50 - 150

Lab Sample ID: 400-144729-30 MS
Matrix: Water
Analysis Batch: 372685

Client Sample ID: AX24173 MW-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2200		700	2820		mg/L		83	77 - 128

Lab Sample ID: 400-144729-30 MSD
Matrix: Water
Analysis Batch: 372685

Client Sample ID: AX24173 MW-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfate	2200		700	2900		mg/L		94	77 - 128	3	5

Chain of Custody Record

Client Information		Sampler: Ben Rothschild/Anthony Goggins		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-56525-24537.1	
Client Contact: Keith Kornegay		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		Page 1 of 1		Job #:	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		City: Calera		State, Zip: AL, 35040		Phone: 205-664-6004	
Email: ikkorneg@southernco.com		Project #: 40007143		SSOW#:		Due Date Requested: 10-31-17		TAT Requested (days):	
Site: Gorgas Landfill		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=organic)	
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=organic)	
AX24128		10/12/17		0935		G		Water	
AX24129		10/12/17		1045		G		Water	
AX24130		10/12/17		1200		G		Water	
AX24131		10/12/17		1309		G		Water	
AX24132		10/12/17		1309		G		Water	
AX24133		10/12/17		1430		G		Water	
AX24134		10/12/17		1619		G		Water	
AX24135		10/12/17		1458		G		Water	
Possible Hazard Identification		<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		Date: 10/16/2017 12:00		Company: APC		Received by: [Signature]	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: Keith Kornegay		Date: 10/17/17 1020		Company: JRP		Received by: [Signature]	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Date: 10/17/17 1020		Company: JRP		Received by: [Signature]	
Cooler Temperature(s) °C and Other Remarks: 4.2 °C JRP 7		Date: 10/17/17 1020		Company: JRP		Received by: [Signature]		Date: 10/17/17 1020	



Chain of Custody Record



Client Information		Lab PIV:		Carrier Tracking No(s):							
Sampler: Nick Pitts/Anthony Goggins		Whitmire, Cheyenne R		COC No: 400-56525-24537.1							
Client Contact: Keith Kornegay		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1							
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		Job #:							
City: Callera		State/Zip: AL, 35040		PO #:							
Phone: 205-664-6004		WO #:		Project #: 40007143							
Email: fkkorneg@southernco.com		SSOW#:		Site: Gorgas Landfill							
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air)	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:
AX24136	10/12/17	1557	G	Water						1	MW-7
AX24137	10/12/17	1618	G	Water						1	FB-2 (Field Blank)
AX24138	10/12/17	1645	G	Water						1	EB-1 (Equipment Blank)
AX24139	10/12/17	1242	G	Water						1	MW-6
AX24140	10/12/17	1616	G	Water						1	MW-5
AX24141	10/12/17	1737	G	Water						1	MW-18
AX24142	10/12/17	1242	G	Water						1	MW-6DUP
AX24143	10/12/17	1519	G	Water						1	FB-1 (Field Blank)
Possible Hazard Identification <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 Relinquished by: Date/Time: 10/16/2017 12:00 Company: APC Relinquished by: Keith Kornegay Relinquished by: Relinquished by:											
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:											



Chain of Custody Record

Client Information		Sampler: Nick Pitts/Ben Rothschild		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-56525-24537.1	
Client Contact: Keith Kornegay		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1 of 1		Job #:	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		City: Calera		State/Zip: AL, 35040		Phone: 205-664-6004	
Email: fkorneg@southernco.com		Project #: 40007143		SSOW#:		Site: Gorgas Landfill		Due Date Requested: 10-31-17	
TAT Requested (days):		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Test, A=Air)	
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		MW-13		MW-14		MW-15		MW-15 DUP (Sample Duplicate)	
MW-16		MW-20		MW-6		FB-2 (Field Blank)			
Special Instructions/Note:									
Preservation Codes:		M - Hexane		N - None		O - AsNaO2		P - Na2O4S	
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		M - EDTA		W - ph 4-5		Z - other (specify)	
Other:									
Analysis Requested		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab		Archive For _____ Months	
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/Time: 10/16/2017 12:00	
Relinquished by: Keith Kornegay		Company: APC		Date/Time:		Relinquished by:		Company:	
Relinquished by:		Company:		Date/Time:		Relinquished by:		Company:	
Relinquished by:		Company:		Date/Time:		Relinquished by:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		10/17/17		10/17/17	



Chain of Custody Record

Client Information			Lab PM: Whitmire, Cheyenne R			Carmer Tracking No(s):			COC No: 400-56625-24537.1		
Client Contact: Keith Kornegay			Phone: Nick Pitts/Anthony Goggins			E-Mail: cheyenne.whitmire@testamericainc.com			Page: Page 1 of 1		
Company: Alabama Power General Test Laboratory			Address: 744 County Rd 87 GSC #8			City: Callera			State/Zip: AL, 35040		
Phone: 205-664-6004			PO #: 40007143			WO #: ikkorneg@southernco.com			Project Name: CCR		
Site: Gorgas Landfill			SSOW#: 40007143			Due Date Requested: 10-31-17			TAT Requested (days):		
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/oil, BT=Tissue, A=Air)	Analysis Requested			Special Instructions/Note:			
					Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers				
AX24168	10/13/17	1123	G	Water	N	X	X	MW-7			
AX24169	10/13/17	1123	G	Water	X	X	X	MW-7 Dup (Sample Duplicate)			
AX24170	10/13/17	1255	G	Water	X	X	X	MW-8			
AX24171	10/13/17	0857	G	Water	X	X	X	MW-18			
AX24172	10/13/17	1021	G	Water	X	X	X	MW-5			
AX24173	10/13/17	1313	G	Water	Y	X	X	MW-19			
AX24174	10/13/17	1326	G	Water	X	X	X	FB-1 Field Blank			
AX24175	10/13/17	1330	G	Water	X	X	X	EB-1 (Equipment Blank)			
Possible Hazard Identification			<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)					
Empty Kit Relinquished by:			Date: 10/16/2017 12:00			Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Relinquished by: Keith Kornegay			Company: APC			Date/Time: 10/17/17 1020					
Relinquished by:			Company: Company			Date/Time:					
Relinquished by:			Company: Company			Date/Time:					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No			Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:					



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144729-1
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144729

List Number: 1

Creator: Perez, Trina M

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	4.2°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	



Accreditation/Certification Summary

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

TestAmerica Job ID: 400-144729-1
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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

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: 400-144723-2

TestAmerica SDG: Plant Gorgas CCB Landfills

Client Project/Site: CCR Plant Gorgas

For:

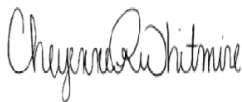
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

11/16/2017 2:17:43 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@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: 400-144723-2
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-333186. The following samples were reduced due to limited volume: AX24144 MW-13 (400-144723-17), AX24144 MW-13 (400-144723-17[MS]), AX24144 MW-13 (400-144723-17[MSD]), AX24145 MW-14 (400-144723-18), AX24146 MW-15 (400-144723-19), AX24147 MW-15 DUP (400-144723-20), AX24148 MW-16 (400-144723-21), AX24149 MW-20 (400-144723-22), AX24150 MW-6 (400-144723-23), AX24151 FB-2 (400-144723-24), AX24152 MW-7 (400-144723-25), AX24153 MW-7 DUP (400-144723-26), AX24154 MW-8 (400-144723-27), AX24155 MW-18 (400-144723-28), AX24156 MW-5 (400-144723-29), AX24157 MW-19 (400-144723-30), AX24158 FB-1 (400-144723-31) and AX24159 EB-1 (400-144723-32).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-333183. The following samples were reduced due to limited volume: AX24144 MW-13 (400-144723-17), AX24144 MW-13 (400-144723-17[MS]), AX24144 MW-13 (400-144723-17[MSD]), AX24145 MW-14 (400-144723-18), AX24146 MW-15 (400-144723-19), AX24147 MW-15 DUP (400-144723-20), AX24148 MW-16 (400-144723-21), AX24149 MW-20 (400-144723-22), AX24150 MW-6 (400-144723-23), AX24151 FB-2 (400-144723-24), AX24152 MW-7 (400-144723-25), AX24153 MW-7 DUP (400-144723-26), AX24154 MW-8 (400-144723-27), AX24155 MW-18 (400-144723-28), AX24156 MW-5 (400-144723-29), AX24157 MW-19 (400-144723-30), AX24158 FB-1 (400-144723-31) and AX24159 EB-1 (400-144723-32).

Method Summary

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

TestAmerica Job ID: 400-144723-2
SDG: Plant Gorgas CCB Landfills

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: 400-144723-2
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-17	AX24144 MW-13	Water	10/13/17 09:24	10/17/17 10:20
400-144723-18	AX24145 MW-14	Water	10/13/17 10:43	10/17/17 10:20
400-144723-19	AX24146 MW-15	Water	10/13/17 11:50	10/17/17 10:20
400-144723-20	AX24147 MW-15 DUP	Water	10/13/17 11:50	10/17/17 10:20
400-144723-21	AX24148 MW-16	Water	10/13/17 13:03	10/17/17 10:20
400-144723-22	AX24149 MW-20	Water	10/13/17 09:06	10/17/17 10:20
400-144723-23	AX24150 MW-6	Water	10/13/17 10:12	10/17/17 10:20
400-144723-24	AX24151 FB-2	Water	10/13/17 10:02	10/17/17 10:20
400-144723-25	AX24152 MW-7	Water	10/13/17 11:23	10/17/17 10:20
400-144723-26	AX24153 MW-7 DUP	Water	10/13/17 11:23	10/17/17 10:20
400-144723-27	AX24154 MW-8	Water	10/13/17 12:55	10/17/17 10:20
400-144723-28	AX24155 MW-18	Water	10/13/17 08:57	10/17/17 10:20
400-144723-29	AX24156 MW-5	Water	10/13/17 10:21	10/17/17 10:20
400-144723-30	AX24157 MW-19	Water	10/13/17 13:13	10/17/17 10:20
400-144723-31	AX24158 FB-1	Water	10/13/17 13:26	10/17/17 10:20
400-144723-32	AX24159 EB-1	Water	10/13/17 13:30	10/17/17 10:20

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24144 MW-13

Lab Sample ID: 400-144723-17

Date Collected: 10/13/17 09:24

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.113		0.0660	0.0667	1.00	0.0735	pCi/L	10/23/17 08:42	11/14/17 06:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					10/23/17 08:42	11/14/17 06:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.448		0.272	0.275	1.00	0.414	pCi/L	10/23/17 09:04	10/27/17 12:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					10/23/17 09:04	10/27/17 12:31	1
Y Carrier	81.1		40 - 110					10/23/17 09:04	10/27/17 12:31	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	0.561		0.280	0.283	5.00	0.414	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24145 MW-14

Lab Sample ID: 400-144723-18

Date Collected: 10/13/17 10:43

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.148		0.0822	0.0833	1.00	0.0984	pCi/L	10/23/17 08:42	11/14/17 06:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					10/23/17 08:42	11/14/17 06:37	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.363	U	0.282	0.283	1.00	0.444	pCi/L	10/23/17 09:04	10/27/17 12:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					10/23/17 09:04	10/27/17 12:31	1
Y Carrier	79.3		40 - 110					10/23/17 09:04	10/27/17 12:31	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	0.511		0.294	0.295	5.00	0.444	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24146 MW-15

Lab Sample ID: 400-144723-19

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.328		0.117	0.121	1.00	0.110	pCi/L	10/23/17 08:42	11/14/17 06:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/23/17 08:42	11/14/17 06:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.265	U	0.256	0.257	1.00	0.413	pCi/L	10/23/17 09:04	10/27/17 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/23/17 09:04	10/27/17 12:32	1
Y Carrier	79.3		40 - 110					10/23/17 09:04	10/27/17 12:32	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	0.593		0.281	0.284	5.00	0.413	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24147 MW-15 DUP

Lab Sample ID: 400-144723-20

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.297		0.112	0.115	1.00	0.104	pCi/L	10/23/17 08:42	11/14/17 06:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 08:42	11/14/17 06:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.308	U	0.221	0.223	1.00	0.341	pCi/L	10/23/17 09:04	10/27/17 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 09:04	10/27/17 12:32	1
Y Carrier	82.2		40 - 110					10/23/17 09:04	10/27/17 12:32	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	0.605		0.248	0.251	5.00	0.341	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24148 MW-16

Lab Sample ID: 400-144723-21

Date Collected: 10/13/17 13:03

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.135		0.0862	0.0870	1.00	0.111	pCi/L	10/23/17 08:42	11/14/17 06:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 08:42	11/14/17 06:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.829		0.309	0.319	1.00	0.429	pCi/L	10/23/17 09:04	10/27/17 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 09:04	10/27/17 12:32	1
Y Carrier	82.2		40 - 110					10/23/17 09:04	10/27/17 12:32	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	0.964		0.321	0.331	5.00	0.429	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24149 MW-20

Lab Sample ID: 400-144723-22

Date Collected: 10/13/17 09:06

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.391		0.135	0.140	1.00	0.144	pCi/L	10/23/17 08:42	11/14/17 06:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/23/17 08:42	11/14/17 06:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.855		0.335	0.344	1.00	0.469	pCi/L	10/23/17 09:04	10/27/17 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/23/17 09:04	10/27/17 12:32	1
Y Carrier	78.9		40 - 110					10/23/17 09:04	10/27/17 12:32	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	1.25		0.361	0.371	5.00	0.469	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24150 MW-6

Lab Sample ID: 400-144723-23

Date Collected: 10/13/17 10:12

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.249		0.104	0.107	1.00	0.104	pCi/L	10/23/17 08:42	11/14/17 06:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 08:42	11/14/17 06:29	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.11		0.360	0.374	1.00	0.492	pCi/L	10/23/17 09:04	10/27/17 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 09:04	10/27/17 12:33	1
Y Carrier	80.7		40 - 110					10/23/17 09:04	10/27/17 12:33	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	1.36		0.375	0.389	5.00	0.492	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24151 FB-2

Lab Sample ID: 400-144723-24

Date Collected: 10/13/17 10:02

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.112	U	0.0868	0.0874	1.00	0.126	pCi/L	10/23/17 08:42	11/14/17 06:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					10/23/17 08:42	11/14/17 06:29	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.534		0.296	0.300	1.00	0.445	pCi/L	10/23/17 09:04	10/27/17 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					10/23/17 09:04	10/27/17 12:33	1
Y Carrier	82.2		40 - 110					10/23/17 09:04	10/27/17 12:33	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	0.646		0.308	0.312	5.00	0.445	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24152 MW-7

Lab Sample ID: 400-144723-25

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.111	U	0.0814	0.0820	1.00	0.113	pCi/L	10/23/17 08:42	11/14/17 08:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 08:42	11/14/17 08:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.407		0.264	0.267	1.00	0.403	pCi/L	10/23/17 09:04	10/27/17 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 09:04	10/27/17 12:33	1
Y Carrier	81.5		40 - 110					10/23/17 09:04	10/27/17 12:33	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	0.517		0.276	0.279	5.00	0.403	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24153 MW-7 DUP

Lab Sample ID: 400-144723-26

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

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		0.0893	0.0904	1.00	0.108	pCi/L	10/23/17 08:42	11/14/17 08:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 08:42	11/14/17 08:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.839		0.295	0.305	1.00	0.386	pCi/L	10/23/17 09:04	10/27/17 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 09:04	10/27/17 12:33	1
Y Carrier	80.7		40 - 110					10/23/17 09:04	10/27/17 12:33	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	0.993		0.308	0.318	5.00	0.386	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24154 MW-8

Lab Sample ID: 400-144723-27

Date Collected: 10/13/17 12:55

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.135		0.0863	0.0872	1.00	0.111	pCi/L	10/23/17 08:42	11/14/17 08:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 08:42	11/14/17 08:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.737		0.272	0.281	1.00	0.361	pCi/L	10/23/17 09:04	10/27/17 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 09:04	10/27/17 12:33	1
Y Carrier	80.0		40 - 110					10/23/17 09:04	10/27/17 12:33	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	0.873		0.285	0.294	5.00	0.361	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24155 MW-18

Lab Sample ID: 400-144723-28

Date Collected: 10/13/17 08:57

Matrix: Water

Date Received: 10/17/17 10:20

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		0.102	0.103	1.00	0.142	pCi/L	10/23/17 08:42	11/14/17 08:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 08:42	11/14/17 08:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.269	U	0.248	0.249	1.00	0.399	pCi/L	10/23/17 09:04	10/27/17 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/23/17 09:04	10/27/17 12:33	1
Y Carrier	80.7		40 - 110					10/23/17 09:04	10/27/17 12:33	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	0.433		0.268	0.269	5.00	0.399	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24156 MW-5

Lab Sample ID: 400-144723-29

Date Collected: 10/13/17 10:21

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142		0.0864	0.0873	1.00	0.108	pCi/L	10/23/17 08:42	11/14/17 08:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 08:42	11/14/17 08:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.249	U	0.244	0.245	1.00	0.395	pCi/L	10/23/17 09:04	10/27/17 12:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 09:04	10/27/17 12:31	1
Y Carrier	83.7		40 - 110					10/23/17 09:04	10/27/17 12:31	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	0.391	U	0.259	0.260	5.00	0.395	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24157 MW-19

Lab Sample ID: 400-144723-30

Date Collected: 10/13/17 13:13

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.220		0.108	0.110	1.00	0.128	pCi/L	10/23/17 08:42	11/14/17 08:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/23/17 08:42	11/14/17 08:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.341	U	0.236	0.238	1.00	0.362	pCi/L	10/23/17 09:04	10/27/17 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/23/17 09:04	10/27/17 12:32	1
Y Carrier	81.5		40 - 110					10/23/17 09:04	10/27/17 12:32	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	0.561		0.260	0.262	5.00	0.362	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24158 FB-1

Lab Sample ID: 400-144723-31

Date Collected: 10/13/17 13:26

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0102	U	0.0441	0.0441	1.00	0.102	pCi/L	10/23/17 08:42	11/14/17 08:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/23/17 08:42	11/14/17 08:27	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	0.239	0.240	1.00	0.400	pCi/L	10/23/17 09:04	10/27/17 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/23/17 09:04	10/27/17 12:32	1
Y Carrier	83.4		40 - 110					10/23/17 09:04	10/27/17 12:32	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	0.163	U	0.243	0.244	5.00	0.400	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24159 EB-1

Lab Sample ID: 400-144723-32

Date Collected: 10/13/17 13:30

Matrix: Water

Date Received: 10/17/17 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0505	U	0.0587	0.0589	1.00	0.0947	pCi/L	10/23/17 08:42	11/14/17 08:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					10/23/17 08:42	11/14/17 08:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.207	U	0.230	0.231	1.00	0.378	pCi/L	10/23/17 09:04	10/27/17 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					10/23/17 09:04	10/27/17 12:32	1
Y Carrier	88.2		40 - 110					10/23/17 09:04	10/27/17 12:32	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	0.258	U	0.237	0.238	5.00	0.378	pCi/L		11/15/17 16:36	1

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-2
SDG: Plant Gorgas CCB Landfills

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: 400-144723-2
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24144 MW-13

Lab Sample ID: 400-144723-17

Date Collected: 10/13/17 09:24

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 06:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:31	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24145 MW-14

Lab Sample ID: 400-144723-18

Date Collected: 10/13/17 10:43

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 06:37	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:31	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24146 MW-15

Lab Sample ID: 400-144723-19

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 06:28	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:32	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24147 MW-15 DUP

Lab Sample ID: 400-144723-20

Date Collected: 10/13/17 11:50

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 06:28	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:32	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-2
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24148 MW-16

Lab Sample ID: 400-144723-21

Date Collected: 10/13/17 13:03

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 06:28	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:32	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24149 MW-20

Lab Sample ID: 400-144723-22

Date Collected: 10/13/17 09:06

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 06:28	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:32	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24150 MW-6

Lab Sample ID: 400-144723-23

Date Collected: 10/13/17 10:12

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 06:29	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:33	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24151 FB-2

Lab Sample ID: 400-144723-24

Date Collected: 10/13/17 10:02

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 06:29	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:33	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24152 MW-7

Lab Sample ID: 400-144723-25

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 08:25	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:33	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24153 MW-7 DUP

Lab Sample ID: 400-144723-26

Date Collected: 10/13/17 11:23

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 08:25	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:33	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24154 MW-8

Lab Sample ID: 400-144723-27

Date Collected: 10/13/17 12:55

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 08:25	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:33	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24155 MW-18

Lab Sample ID: 400-144723-28

Date Collected: 10/13/17 08:57

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 08:25	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:33	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-2
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24156 MW-5

Lab Sample ID: 400-144723-29

Date Collected: 10/13/17 10:21

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 08:25	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:31	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24157 MW-19

Lab Sample ID: 400-144723-30

Date Collected: 10/13/17 13:13

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	337100	11/14/17 08:25	KLS	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:32	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24158 FB-1

Lab Sample ID: 400-144723-31

Date Collected: 10/13/17 13:26

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	336975	11/14/17 08:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:32	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24159 EB-1

Lab Sample ID: 400-144723-32

Date Collected: 10/13/17 13:30

Matrix: Water

Date Received: 10/17/17 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333183	10/23/17 08:42	LDE	TAL SL
Total/NA	Analysis	9315		1	336975	11/14/17 08:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333186	10/23/17 09:04	LDE	TAL SL
Total/NA	Analysis	9320		1	334386	10/27/17 12:32	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	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: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Rad

Prep Batch: 333183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-17	AX24144 MW-13	Total/NA	Water	PrecSep-21	
400-144723-18	AX24145 MW-14	Total/NA	Water	PrecSep-21	
400-144723-19	AX24146 MW-15	Total/NA	Water	PrecSep-21	
400-144723-20	AX24147 MW-15 DUP	Total/NA	Water	PrecSep-21	
400-144723-21	AX24148 MW-16	Total/NA	Water	PrecSep-21	
400-144723-22	AX24149 MW-20	Total/NA	Water	PrecSep-21	
400-144723-23	AX24150 MW-6	Total/NA	Water	PrecSep-21	
400-144723-24	AX24151 FB-2	Total/NA	Water	PrecSep-21	
400-144723-25	AX24152 MW-7	Total/NA	Water	PrecSep-21	
400-144723-26	AX24153 MW-7 DUP	Total/NA	Water	PrecSep-21	
400-144723-27	AX24154 MW-8	Total/NA	Water	PrecSep-21	
400-144723-28	AX24155 MW-18	Total/NA	Water	PrecSep-21	
400-144723-29	AX24156 MW-5	Total/NA	Water	PrecSep-21	
400-144723-30	AX24157 MW-19	Total/NA	Water	PrecSep-21	
400-144723-31	AX24158 FB-1	Total/NA	Water	PrecSep-21	
400-144723-32	AX24159 EB-1	Total/NA	Water	PrecSep-21	
MB 160-333183/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-333183/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-144723-17 MS	AX24144 MW-13	Total/NA	Water	PrecSep-21	
400-144723-17 MSD	AX24144 MW-13	Total/NA	Water	PrecSep-21	

Prep Batch: 333186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-17	AX24144 MW-13	Total/NA	Water	PrecSep_0	
400-144723-18	AX24145 MW-14	Total/NA	Water	PrecSep_0	
400-144723-19	AX24146 MW-15	Total/NA	Water	PrecSep_0	
400-144723-20	AX24147 MW-15 DUP	Total/NA	Water	PrecSep_0	
400-144723-21	AX24148 MW-16	Total/NA	Water	PrecSep_0	
400-144723-22	AX24149 MW-20	Total/NA	Water	PrecSep_0	
400-144723-23	AX24150 MW-6	Total/NA	Water	PrecSep_0	
400-144723-24	AX24151 FB-2	Total/NA	Water	PrecSep_0	
400-144723-25	AX24152 MW-7	Total/NA	Water	PrecSep_0	
400-144723-26	AX24153 MW-7 DUP	Total/NA	Water	PrecSep_0	
400-144723-27	AX24154 MW-8	Total/NA	Water	PrecSep_0	
400-144723-28	AX24155 MW-18	Total/NA	Water	PrecSep_0	
400-144723-29	AX24156 MW-5	Total/NA	Water	PrecSep_0	
400-144723-30	AX24157 MW-19	Total/NA	Water	PrecSep_0	
400-144723-31	AX24158 FB-1	Total/NA	Water	PrecSep_0	
400-144723-32	AX24159 EB-1	Total/NA	Water	PrecSep_0	
MB 160-333186/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-333186/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-144723-17 MS	AX24144 MW-13	Total/NA	Water	PrecSep_0	
400-144723-17 MSD	AX24144 MW-13	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-333183/1-A
Matrix: Water
Analysis Batch: 336975

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333183

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.006926	U	0.0486	0.0486	1.00	0.107	pCi/L	10/23/17 08:42	11/14/17 06:30	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits					10/23/17 08:42	11/14/17 06:30	1
	105		40 - 110							

Lab Sample ID: LCS 160-333183/2-A
Matrix: Water
Analysis Batch: 336975

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333183

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.7	13.92		1.41	1.00	0.101	pCi/L	88	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits					10/23/17 08:42	11/14/17 06:30
	109		40 - 110						

Lab Sample ID: 400-144723-17 MS
Matrix: Water
Analysis Batch: 336982

Client Sample ID: AX24144 MW-13
Prep Type: Total/NA
Prep Batch: 333183

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
						Uncert. (2σ+/-)					
Radium-226	0.113		15.8	13.14		1.34	1.00	0.0925	pCi/L	83	75 - 138
Carrier	MS MS		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits					10/23/17 08:42	11/14/17 06:30	1	
	107		40 - 110								

Lab Sample ID: 400-144723-17 MSD
Matrix: Water
Analysis Batch: 336982

Client Sample ID: AX24144 MW-13
Prep Type: Total/NA
Prep Batch: 333183

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
						Uncert. (2σ+/-)							
Radium-226	0.113		15.7	14.31		1.45	1.00	0.0973	pCi/L	90	75 - 138	0.42	1
Carrier	MSD MSD		Limits		Prepared	Analyzed	Dil Fac						
Ba Carrier	%Yield	Qualifier	Limits					10/23/17 08:42	11/14/17 06:30	1			
	102		40 - 110										

QC Sample Results

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

TestAmerica Job ID: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-333186/1-A
Matrix: Water
Analysis Batch: 334386

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333186

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1286	U	0.214	0.214	1.00	0.362	pCi/L	10/23/17 09:04	10/27/17 12:31	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110	10/23/17 09:04	10/27/17 12:31	1
Y Carrier	84.5		40 - 110	10/23/17 09:04	10/27/17 12:31	1

Lab Sample ID: LCS 160-333186/2-A
Matrix: Water
Analysis Batch: 334386

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333186

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	17.0	19.02		1.99	1.00	0.358	pCi/L	112	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	109		40 - 110
Y Carrier	80.7		40 - 110

Lab Sample ID: 400-144723-17 MS
Matrix: Water
Analysis Batch: 334386

Client Sample ID: AX24144 MW-13
Prep Type: Total/NA
Prep Batch: 333186

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.448		17.0	20.18		2.10	1.00	0.370	pCi/L	116	45 - 150

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	107		40 - 110
Y Carrier	80.4		40 - 110

Lab Sample ID: 400-144723-17 MSD
Matrix: Water
Analysis Batch: 334386

Client Sample ID: AX24144 MW-13
Prep Type: Total/NA
Prep Batch: 333186

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.448		17.0	21.23		2.21	1.00	0.368	pCi/L	123	45 - 150	0.24	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	80.4		40 - 110

Chain of Custody Record

THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: Nick Pitts/Ben Rothschild		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Client Contact: Keith Kornegay		Phone:		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		City: Calera		Page: Page 1 of 1	
State, Zip: AL, 35040		Phone: 205-664-6004		PO #:		Job #:	
Email: kkornega@alabamapower.com		WO #:		Project #: 40007143		SSOW#:	
Site: Gorgas Landfill		Due Date Requested: 11-17-17		TAT Requested (days):			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=other)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra226, Ra226Ra226_GFPc	Total Number of Containers	Special Instructions/Note:
AX24144	10/13/17	0924	G	Water		X	Y	X	3	MW-13
AX24145	10/13/17	1043	G	Water		X	X	X	1	MW-14
AX24146	10/13/17	1150	G	Water		X	X	X	1	MW-15
AX24147	10/13/17	1150	G	Water		X	X	X	1	MW-15 DUP (Sample Duplicate)
AX24148	10/13/17	1303	G	Water		X	X	X	1	MW-16
AX24149	10/13/17	0906	G	Water		X	X	X	1	MW-20
AX24150	10/13/17	1012	G	Water		X	X	X	1	MW-6
AX24151	10/13/17	1002	G	Water		X	X	X	1	FB-2 (Field 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: Keith Kornegay Date/Time: 10/16/2017 12:00 Company: APC

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: _____

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

Special Instructions/QC Requirements: _____

Method of Shipment: _____

Received by: _____ Date/Time: 10/17/17 1020 Company: _____

Received by: _____ Date/Time: _____ Company: _____

Received by: _____ Date/Time: 11/16/17 Company: _____

Cooler Temperature(s) and/or Other Remarks: 18.7 C, 19.2 C, 20.6 C, 19.7 C



Chain of Custody Record

THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Client Contact: Keith Kornegay		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: Calera		State, Zip: AL, 35040		Job #:	
Phone: 205-664-6004		PO #:		Preservation Codes:	
Email: fkkorneq@southernco.com		WO #:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Arnechlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Project Name: CCR		Project #: 40007143		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Site: Gorgas Landfill		SSOW#:		Total Number of Containers	

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)	Special Instructions/Note:
AX24152	10/13/17	1123	G	Water	D	X	X	MW-7
AX24153	10/13/17	1123	G	Water		X	X	MW-7 Dup (Sample Duplicate)
AX24154	10/13/17	1255	G	Water		X	X	MW-8
AX24155	10/13/17	0857	G	Water		X	X	MW-18
AX24156	10/13/17	1021	G	Water		X	X	MW-5
AX24157	10/13/17	1313	G	Water		X	X	MW-19
AX24158	10/13/17	1326	G	Water		X	X	FB-1 (Field Blank)
AX24159	10/13/17	1330	G	Water		X	X	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: Keith Kornegay Date/Time: 10/16/2017 12:00 Company: APC
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks:



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-2
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

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	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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 <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: 400-144723-2
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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

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
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	11-30-17 *
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	12-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	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: 400-144723-2
SDG: Plant Gorgas CCB Landfills

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	02-21-18
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



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 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 (1L): Radiological		
Comments	No temperature preservation required.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-20	10/13/2017	09:06	1	Groundwater		AX24149
MW-6	10/13/2017	10:12	1	Groundwater		AX24150
FB-2	10/13/2017	10:02	1	Field Blank		AX24151
MW-7	10/13/2017	11:23	1	Groundwater		AX24152
MW-7 Dup	10/13/2017	11:23	1	Sample Duplicate		AX24153
MW-8	10/13/2017	12:55	1	Groundwater		AX24154

Relinquished By	Received By	Date/Time
 	 Keith Kornegay	10/13/2017 14:15 10/13/2017 20:04
	<small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornega@southemco.com, c=US Date: 2017.10.13 20:04:47 -0500</small>	

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	Cooler Temp
		Thermometer ID
		pH Strip ID
		NA
		NA
		6153-32041-10-8



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 15:30

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="No temperature preservation required."/>

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-18	10/13/2017	08:57	1	Groundwater		AX24155
MW-5	10/13/2017	10:21	1	Groundwater		AX24156
MW-19	10/13/2017	13:13	1	Groundwater		AX24157
FB-1	10/13/2017	13:26	1	Field Blank		AX24158
EB-1	10/13/2017	13:30	1	Equipment Blank		AX24159

Relinquished By	Received By	Date/Time
	<div style="border: 1px solid black; padding: 2px;"> Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.10.13 19:54:41 -0500</small> </div>	<input type="text" value="10/13/2017 19:54"/>

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="3901-20009-2-1"/>	
Cooler Temp <input type="text" value="NA"/>	
Thermometer ID <input type="text" value="NA"/>	pH Strip ID <input type="text" value="6153-32041-10-8"/>



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/13/2017 16:30

Requested Complete Date	Routine
Site Representative	Che George
Collector	Ben Rothschadl

Results To	Dustin Brooks, Greg Dyer
Requested By	Greg Dyer
Location	Gorgas Landfill

Analysis Requested	Bottle 1 (1L): Radiological
Comments	Radium Duplicate collected at MW-13. No temperature preservation requirement.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/13/2017	09:24	3	Groundwater		AX24144
MW-14	10/13/2017	10:43	1	Groundwater		AX24145
MW-15	10/13/2017	11:50	1	Groundwater		AX24146
MW-15 DUP	10/13/2017	11:50	1	Sample Duplicate		AX24147
MW-16	10/13/2017	13:03	1	Groundwater		AX24148

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.10.13 19:48:35 -0500</small>	10/13/2017 19:48

SmarTroll ID	5151-26193-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20010-2-2	
Cooler Temp	NA	
Thermometer ID	NA	
pH Strip ID	6153-32042-10-9	

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

 Alabama Power



Sample Group : WMWGORLF_1120
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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1120

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 anions were outsourced to Test America, Pensacola for analysis. Below is Case Narrative provided by Test America.

**Job Narrative
400-144723-4
General Chemistry**

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 374155 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits. RPD Limit is 4, RPD value is 17.

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373428 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 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX24230 MW-8 (400-144723-52). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373081 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: AX24227 MW-5 (400-144723-49), (400-144674-A-1), (400-144674-A-1 MS), (400-144674-A-1 MSD), AX24228 MW-6 (400-144723-50), AX24228 MW-6 (400-144723-50[MS]), AX24228 MW-6 (400-144723-50[MSD]), AX24229 MW-7 (400-144723-51), AX24230 MW-8 (400-144723-52), (400-144723-A-127), (400-144723-A-127 MS), (400-144723-A-127 MSD) AX24231 MW-18 (400-144723-53), (400-144723-A-53 MS), (400-144723-A-53 MSD), AX24232 MW-6 DUP (400-144723-54), AX24234 MW-13 (400-144723-56), AX24235 MW-14 (400-144723-57), AX24236 MW-15 (400-144723-58), AX24238 MW-16 (400-144723-60), AX24239 MW-16 DUP (400-144723-61), AX24240 MW-19 (400-144723-62) and AX24241 MW-20 (400-144723-63). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373750 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373759 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.



Metals ICP

Gorgas Landfill

WMWGORLF_1120

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>
AX24227	20171018K	WMWGORLF_1120
AX24228	20171018K	WMWGORLF_1120
AX24229	20171018K	WMWGORLF_1120
AX24230	20171018K	WMWGORLF_1120
AX24231	20171018K	WMWGORLF_1120
AX24232	20171018K	WMWGORLF_1120
AX24233	20171018K	WMWGORLF_1120
AX24234	20171018K	WMWGORLF_1120
AX24235	20171018K	WMWGORLF_1120
AX24236	20171018K	WMWGORLF_1120
AX24237	20171018AK	WMWGORLF_1120
AX24238	20171018AK	WMWGORLF_1120
AX24239	20171018AK	WMWGORLF_1120
AX24240	20171018AK	WMWGORLF_1120
AX24241	20171018AK	WMWGORLF_1120
AX24242	20171018AK	WMWGORLF_1120

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

General Quality Control Procedures:

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



- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- An additional Rinse was added between samples for monitoring Lithium due to possible matrix issues.
- 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	AX24236

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 dilution to compensate for any matrix effects. The following samples were further 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>
AX24227	Calcium	x10
AX24228	Calcium	x10
AX24229	Calcium	x10
AX24230	Calcium	x10
AX24231	Calcium	x10
AX24232	Calcium	x100
AX24234	Calcium	x10
AX24235	Calcium	x10

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



AX24236	Calcium	x10
AX24236MS	Calcium	x10
AX24236MSD	Calcium	x10
AX24238	Calcium	x10
AX24239	Calcium	x10
AX24240	Calcium	x10
AX24241	Calcium	x10

8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1120

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>
AX24227	604632	WMWGORLF_1120
AX24228	604632	WMWGORLF_1120
AX24229	604632	WMWGORLF_1120
AX24230	604632	WMWGORLF_1120
AX24231	604632	WMWGORLF_1120
AX24232	604632	WMWGORLF_1120
AX24233	604632	WMWGORLF_1120
AX24234	604632	WMWGORLF_1120
AX24235	604632	WMWGORLF_1120
AX24236	604632	WMWGORLF_1120
AX24237	604633	WMWGORLF_1120
AX24238	604633	WMWGORLF_1120
AX24239	604633	WMWGORLF_1120
AX24240	604633	WMWGORLF_1120
AX24241	604633	WMWGORLF_1120
AX24242	604633	WMWGORLF_1120

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_1120

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>
AX24227	604857	WMWGORLF_1120
AX24228	604857	WMWGORLF_1120
AX24229	604857	WMWGORLF_1120
AX24230	604857	WMWGORLF_1120
AX24231	604857	WMWGORLF_1120
AX24232	604857	WMWGORLF_1120
AX24233	604857	WMWGORLF_1120
AX24234	604857	WMWGORLF_1120
AX24235	604857	WMWGORLF_1120
AX24236	604857	WMWGORLF_1120
AX24237	604858	WMWGORLF_1120
AX24238	604858	WMWGORLF_1120
AX24239	604858	WMWGORLF_1120
AX24240	604858	WMWGORLF_1120
AX24241	604858	WMWGORLF_1120
AX24242	604858	WMWGORLF_1120

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_1120

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>
AX24227	604758	WMWGORLF_1120
AX24228	604758	WMWGORLF_1120
AX24229	604758	WMWGORLF_1120
AX24230	604758	WMWGORLF_1120
AX24231	604758	WMWGORLF_1120
AX24232	604758	WMWGORLF_1120
AX24233	604758	WMWGORLF_1120
AX24234	604758	WMWGORLF_1120
AX24235	604758	WMWGORLF_1120
AX24236	604758	WMWGORLF_1120
AX24237	604759	WMWGORLF_1120
AX24238	604759	WMWGORLF_1120
AX24239	604759	WMWGORLF_1120
AX24240	604759	WMWGORLF_1120
AX24241	604759	WMWGORLF_1120
AX24242	604759	WMWGORLF_1120

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 0.5 mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5% with the exception of the sample duplicate in batch 604758, which was found to be 32.5% due to a crack in the beaker found during sample weighing process. Sample duplicate for AX24236 was reanalyzed in batch 605009 with all criteria passing.
- 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 AX24233, AX24237, and AX24242 which did not meet the 2.5mg residue requirement.

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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24227

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01	J	0.00990	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2			0.02	0.1	J	0.0305	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10			1.0	5.0		391	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2			0.010	0.05		0.0931	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1				250		3910	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1			0.60	2.00		7.4	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1			0.032	0.10		0.37	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	70			98.0	350		2300	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24227

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20
AX24236	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20
AX24236	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	20
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	20
AX24236	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20
AX24236	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	20
AX24236	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20
AX24236	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	20
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24227

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60	0.589	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24228

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00476	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0129	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0828	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	400	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0296	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.244	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	3260	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	2.8	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.14	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	60		84.0	300	1900	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24228

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit
			MB	Limit					Limit	Rec	Limit	Prec	
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20
AX24236	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20
AX24236	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	20
AX24236	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20
AX24236	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	20
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	20
AX24236	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20
AX24236	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	20
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	20

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Laboratory certification ID: E571114

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24228

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec
AX24236	Solids, Dissolved	mg/L	5.00	25				2560	52.0	40 to 60			0.589 5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24229

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00127	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0123	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0756	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	283	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00451	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.112	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			125	2320	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	33	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.20	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	60		84.0	300	1300	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

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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: WMWGORLF
 Sample Date: 14-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24229

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	20
AX24236	Arsenic, Total	mg/L	0.0000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20
AX24236	Barium, Total	mg/L	0.00000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	20
AX24236	Lead, Total	mg/L	0.0000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20
AX24236	Molybdenum, Total	mg/L	0.0000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	20
AX24236	Chromium, Total	mg/L	0.0000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20
AX24236	Thallium, Total	mg/L	0.0000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	20
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24229

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60	0.589	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24230

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00126	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0134	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0702	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	299	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00513	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.177	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	2630	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	5		3.00	10	140	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.22	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	60		84.0	300	1400	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24230

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20
AX24236	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20
AX24236	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	20
AX24236	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20
AX24236	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	20
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	20
AX24236	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20
AX24236	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	20
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24230

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24236	Solids, Dissolved	mg/L	5.00	25				2560	52.0	40 to 60			0.589 5

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Expiration: June 30, 2018

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24231

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00927	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0333	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	345	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.0581	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00295	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	3150	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.0	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.32	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	60		84.0	300	1800	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24231

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit
			MB	Limit					Limit	Rec	Limit	Prec	
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20
AX24236	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20
AX24236	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	20
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	20
AX24236	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20
AX24236	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	20
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	20
AX24236	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20
AX24236	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24231

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60	0.589	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-6DUP

Laboratory ID Number: AX24232

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00479	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0128	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0818	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	100		10	50	386	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0306	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.242	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	3240	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	2.0	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.14	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	60		84.0	300	1800	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-6DUP

Laboratory ID Number: AX24232

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit
			MB	Limit					Limit	Rec	Limit	Prec	
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20
AX24236	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20
AX24236	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	20
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	20
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	20
AX24236	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20
AX24236	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20
AX24236	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20
AX24236	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	20
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-6DUP

Laboratory ID Number: AX24232

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60	0.589	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24233

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	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: WMWGORLFFB
 Sample Date: 14-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24233

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20
AX24236	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20
AX24236	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	20
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	20
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	20
AX24236	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20
AX24236	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20
AX24236	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20
AX24236	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	20
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24233

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60		0.589 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, 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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24234

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0136	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0555	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	300	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0201	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	J 0.0193	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	3120	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.6	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.21	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	60		84.0	300	1800	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24234

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20
AX24236	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20
AX24236	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	20
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	20
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	20
AX24236	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20
AX24236	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	20
AX24236	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20
AX24236	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24234

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60	0.589	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24235

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00145	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0124	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0458	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	315	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0113	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	J 0.0327	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	3090	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.3	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.26	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	60		84.0	300	1700	mg/L

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

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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: WMWGORLF
 Sample Date: 14-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24235

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20	
AX24236	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20	
AX24236	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	20	
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20	
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	20	
AX24236	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20	
AX24236	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20	
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20	
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20	
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	20	
AX24236	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20	
AX24236	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	20	
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20	
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20	
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24235

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60		0.589 5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24236

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0117	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0533	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	262	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0716	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.0596	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			125	2530	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.1	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.37	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	60		84.0	300	1500	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
 Calcium recovery is out of range. Spike amount is less than 30% of the sample amount. SGC 12/6/17

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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24236

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX24236	Calcium, Total	mg/L	-0.00816	0.22	5.00	285	275	4.60	4.25 to 5.75	460	70 to 130	3.57	20
AX24236	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0999	0.0997	0.104	0.085 to 0.115	99.9	70 to 130	0.225	20
AX24236	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0956	0.0953	0.0945	0.085 to 0.115	95.6	70 to 130	0.321	20
AX24236	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.103	0.103	0.111	0.085 to 0.115	103	70 to 130	0.548	20
AX24236	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.100	0.101	0.103	0.085 to 0.115	100	70 to 130	0.544	20
AX24236	Lithium, Total	mg/L	-0.000147	0.022	0.20	0.286	0.284	0.186	0.17 to 0.23	113	70 to 130	0.604	20
AX24236	Mercury, Total by CVAA	mg/L	0.0000510	0.0005	0.004	0.00376	0.00383	0.00381	0.0034 to 0.0046	94.0	70 to 130	1.94	20
AX24236	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.105	0.111	0.085 to 0.115	104	70 to 130	0.250	20
AX24236	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.103	0.101	0.101	0.085 to 0.115	103	70 to 130	1.77	20
AX24236	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.422	20
AX24236	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0952	0.0960	0.0983	0.085 to 0.115	95.2	70 to 130	0.817	20
AX24236	Boron, Total	mg/L	0.000182	0.044	1.00	1.01	0.982	0.918	0.85 to 1.15	95.9	70 to 130	3.04	20
AX24236	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.179	0.179	0.101	0.085 to 0.115	108	70 to 130	0.109	20
AX24236	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.105	0.102	0.107	0.085 to 0.115	105	70 to 130	2.11	20
AX24236	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.109	0.108	0.0976	0.085 to 0.115	97.7	70 to 130	0.817	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
 Calcium recovery is out of range. Spike amount is less than 30% of the sample amount. SGC 12/6/17

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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24236

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24236	Solids, Dissolved	mg/L	5.00	25				2560	52.0	40 to 60			0.589 5

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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
 Calcium recovery is out of range. Spike amount is less than 30% of the sample amount. SGC 12/6/17

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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24237

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		2	0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7		2	0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E		1	0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E		1	1.40	5.00	U <1.4	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24237

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit	
			MB	Limit					Limit	Rec	Limit	Prec			
AX24242	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.102	0.101	0.101	0.085 to 0.115		102	70 to 130		1.66	20
AX24242	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0954	0.0933	0.0983	0.085 to 0.115		95.4	70 to 130		2.23	20
AX24242	Boron, Total	mg/L	0.000318	0.044	1.00	0.967	0.981	0.969	0.85 to 1.15		96.7	70 to 130		1.49	20
AX24242	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.100	0.0985	0.107	0.085 to 0.115		100	70 to 130		1.81	20
AX24242	Calcium, Total	mg/L	-0.00648	0.22	5.00	4.78	4.84	4.98	4.25 to 5.75		95.5	70 to 130		1.23	20
AX24242	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.103	0.101	0.103	0.085 to 0.115		103	70 to 130		1.86	20
AX24242	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.104	0.111	0.085 to 0.115		104	70 to 130		0.228	20
AX24242	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.0998	0.101	0.085 to 0.115		101	70 to 130		1.70	20
AX24242	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.110	0.109	0.101	0.085 to 0.115		110	70 to 130		0.812	20
AX24242	Lithium, Total	mg/L	-0.0000778	0.022	0.20	0.196	0.200	0.197	0.17 to 0.23		98.2	70 to 130		1.66	20
AX24242	Mercury, Total by CVAA	mg/L	0.0000530	0.0005	0.004	0.00377	0.00383	0.00379	0.0034 to 0.0046		94.3	70 to 130		1.62	20
AX24242	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.104	0.102	0.111	0.085 to 0.115		104	70 to 130		1.84	20
AX24242	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0917	0.0906	0.0945	0.085 to 0.115		91.7	70 to 130		1.23	20
AX24242	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.0971	0.0972	0.0976	0.085 to 0.115		97.1	70 to 130		0.0484	20
AX24242	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0993	0.0985	0.104	0.085 to 0.115		99.3	70 to 130		0.720	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24237

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24262	Solids, Dissolved	mg/L	4.00	25			2610	46.0	40 to 60	1.56	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24238

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00325	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0126	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0471	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	299	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00954	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	J 0.0167	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			125	2340	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	3.4	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.18	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	75		110	380	1200	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24238

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24242	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.102	0.101	0.101	0.085 to 0.115	102	70 to 130	1.66	20	
AX24242	Boron, Total	mg/L	0.000318	0.044	1.00	0.967	0.981	0.969	0.85 to 1.15	96.7	70 to 130	1.49	20	
AX24242	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0954	0.0933	0.0983	0.085 to 0.115	95.4	70 to 130	2.23	20	
AX24242	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.104	0.102	0.111	0.085 to 0.115	104	70 to 130	1.84	20	
AX24242	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0917	0.0906	0.0945	0.085 to 0.115	91.7	70 to 130	1.23	20	
AX24242	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.103	0.101	0.103	0.085 to 0.115	103	70 to 130	1.86	20	
AX24242	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.104	0.111	0.085 to 0.115	104	70 to 130	0.228	20	
AX24242	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.0998	0.101	0.085 to 0.115	101	70 to 130	1.70	20	
AX24242	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.110	0.109	0.101	0.085 to 0.115	110	70 to 130	0.812	20	
AX24242	Lithium, Total	mg/L	-0.0000778	0.022	0.20	0.196	0.200	0.197	0.17 to 0.23	98.2	70 to 130	1.66	20	
AX24242	Mercury, Total by CVAA	mg/L	0.0000530	0.0005	0.004	0.00377	0.00383	0.00379	0.0034 to 0.0046	94.3	70 to 130	1.62	20	
AX24242	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.0971	0.0972	0.0976	0.085 to 0.115	97.1	70 to 130	0.0484	20	
AX24242	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0993	0.0985	0.104	0.085 to 0.115	99.3	70 to 130	0.720	20	
AX24242	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.100	0.0985	0.107	0.085 to 0.115	100	70 to 130	1.81	20	
AX24242	Calcium, Total	mg/L	-0.00648	0.22	5.00	4.78	4.84	4.98	4.25 to 5.75	95.5	70 to 130	1.23	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24238

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24262	Solids, Dissolved	mg/L	4.00	25			2610	46.0	40 to 60	1.56	5

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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
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Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 14-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-16 Dup

Laboratory ID Number: AX24239

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00327	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0126	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0476	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	287	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00958	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	J 0.0165	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			125	2340	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	3.5	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.18	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	75		110	380	1300	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-16 Dup

Laboratory ID Number: AX24239

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit	
			MB	Limit					Limit	Rec	Limit	Prec			
AX24242	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.102	0.101	0.101	0.085 to 0.115		102	70 to 130		1.66	20
AX24242	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0954	0.0933	0.0983	0.085 to 0.115		95.4	70 to 130		2.23	20
AX24242	Boron, Total	mg/L	0.000318	0.044	1.00	0.967	0.981	0.969	0.85 to 1.15		96.7	70 to 130		1.49	20
AX24242	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.103	0.101	0.103	0.085 to 0.115		103	70 to 130		1.86	20
AX24242	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.104	0.111	0.085 to 0.115		104	70 to 130		0.228	20
AX24242	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.0998	0.101	0.085 to 0.115		101	70 to 130		1.70	20
AX24242	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.100	0.0985	0.107	0.085 to 0.115		100	70 to 130		1.81	20
AX24242	Calcium, Total	mg/L	-0.00648	0.22	5.00	4.78	4.84	4.98	4.25 to 5.75		95.5	70 to 130		1.23	20
AX24242	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.104	0.102	0.111	0.085 to 0.115		104	70 to 130		1.84	20
AX24242	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0917	0.0906	0.0945	0.085 to 0.115		91.7	70 to 130		1.23	20
AX24242	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.110	0.109	0.101	0.085 to 0.115		110	70 to 130		0.812	20
AX24242	Lithium, Total	mg/L	-0.0000778	0.022	0.20	0.196	0.200	0.197	0.17 to 0.23		98.2	70 to 130		1.66	20
AX24242	Mercury, Total by CVAA	mg/L	0.0000530	0.0005	0.004	0.00377	0.00383	0.00379	0.0034 to 0.0046		94.3	70 to 130		1.62	20
AX24242	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.0971	0.0972	0.0976	0.085 to 0.115		97.1	70 to 130		0.0484	20
AX24242	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0993	0.0985	0.104	0.085 to 0.115		99.3	70 to 130		0.720	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-16 Dup

Laboratory ID Number: AX24239

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24262	Solids, Dissolved	mg/L	4.00	25			2610	46.0	40 to 60	1.56	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24240

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0100	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0372	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	399	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.168	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.0870	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	3800	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.8	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.34	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	75		110	380	2300	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24240

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24242	Boron, Total	mg/L	0.000318	0.044	1.00	0.967	0.981	0.969	0.85 to 1.15	96.7	70 to 130	1.49	20
AX24242	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0954	0.0933	0.0983	0.085 to 0.115	95.4	70 to 130	2.23	20
AX24242	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.102	0.101	0.101	0.085 to 0.115	102	70 to 130	1.66	20
AX24242	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.110	0.109	0.101	0.085 to 0.115	110	70 to 130	0.812	20
AX24242	Lithium, Total	mg/L	-0.0000778	0.022	0.20	0.196	0.200	0.197	0.17 to 0.23	98.2	70 to 130	1.66	20
AX24242	Mercury, Total by CVAA	mg/L	0.0000530	0.0005	0.004	0.00377	0.00383	0.00379	0.0034 to 0.0046	94.3	70 to 130	1.62	20
AX24242	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.104	0.102	0.111	0.085 to 0.115	104	70 to 130	1.84	20
AX24242	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0917	0.0906	0.0945	0.085 to 0.115	91.7	70 to 130	1.23	20
AX24242	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.100	0.0985	0.107	0.085 to 0.115	100	70 to 130	1.81	20
AX24242	Calcium, Total	mg/L	-0.00648	0.22	5.00	4.78	4.84	4.98	4.25 to 5.75	95.5	70 to 130	1.23	20
AX24242	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.0971	0.0972	0.0976	0.085 to 0.115	97.1	70 to 130	0.0484	20
AX24242	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0993	0.0985	0.104	0.085 to 0.115	99.3	70 to 130	0.720	20
AX24242	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.103	0.101	0.103	0.085 to 0.115	103	70 to 130	1.86	20
AX24242	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.104	0.111	0.085 to 0.115	104	70 to 130	0.228	20
AX24242	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.0998	0.101	0.085 to 0.115	101	70 to 130	1.70	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24240

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24262	Solids, Dissolved	mg/L	4.00	25			2610	46.0	40 to 60	1.56	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24241

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0153	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	0.106	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	346	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.265	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	2590	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E	1		0.60	2.00	4.4	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C	1		0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E	60		84.0	300	1500	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24241

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24242	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0954	0.0933	0.0983	0.085 to 0.115	95.4	70 to 130	2.23	20	
AX24242	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.102	0.101	0.101	0.085 to 0.115	102	70 to 130	1.66	20	
AX24242	Boron, Total	mg/L	0.000318	0.044	1.00	0.967	0.981	0.969	0.85 to 1.15	96.7	70 to 130	1.49	20	
AX24242	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.100	0.0985	0.107	0.085 to 0.115	100	70 to 130	1.81	20	
AX24242	Calcium, Total	mg/L	-0.00648	0.22	5.00	4.78	4.84	4.98	4.25 to 5.75	95.5	70 to 130	1.23	20	
AX24242	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.104	0.102	0.111	0.085 to 0.115	104	70 to 130	1.84	20	
AX24242	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0917	0.0906	0.0945	0.085 to 0.115	91.7	70 to 130	1.23	20	
AX24242	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.110	0.109	0.101	0.085 to 0.115	110	70 to 130	0.812	20	
AX24242	Lithium, Total	mg/L	-0.0000778	0.022	0.20	0.196	0.200	0.197	0.17 to 0.23	98.2	70 to 130	1.66	20	
AX24242	Mercury, Total by CVAA	mg/L	0.0000530	0.0005	0.004	0.00377	0.00383	0.00379	0.0034 to 0.0046	94.3	70 to 130	1.62	20	
AX24242	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.103	0.101	0.103	0.085 to 0.115	103	70 to 130	1.86	20	
AX24242	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.104	0.111	0.085 to 0.115	104	70 to 130	0.228	20	
AX24242	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.0998	0.101	0.085 to 0.115	101	70 to 130	1.70	20	
AX24242	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.0971	0.0972	0.0976	0.085 to 0.115	97.1	70 to 130	0.0484	20	
AX24242	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0993	0.0985	0.104	0.085 to 0.115	99.3	70 to 130	0.720	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24241

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24262	Solids, Dissolved	mg/L	4.00	25			2610	46.0	40 to 60	1.56	5

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CC:

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

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFEB
 Sample Date: 14-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24242

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		2	0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7		2	0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/5/2017	SM 4500 Cl_E		1	0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/5/2017	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/5/2017	SM 4500 SO4_E		1	1.40	5.00	U <1.4	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: 14-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24242

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24242	Chromium, Total	mg/L	0.00000934	0.0044	0.10	0.102	0.101	0.101	0.085 to 0.115	102	70 to 130	1.66	20	
AX24242	Boron, Total	mg/L	0.000318	0.044	1.00	0.967	0.981	0.969	0.85 to 1.15	96.7	70 to 130	1.49	20	
AX24242	Antimony, Total	mg/L	0.0000476	0.00132	0.10	0.0954	0.0933	0.0983	0.085 to 0.115	95.4	70 to 130	2.23	20	
AX24242	Cobalt, Total	mg/L	0.00000128	0.0044	0.10	0.110	0.109	0.101	0.085 to 0.115	110	70 to 130	0.812	20	
AX24242	Lithium, Total	mg/L	-0.0000778	0.022	0.20	0.196	0.200	0.197	0.17 to 0.23	98.2	70 to 130	1.66	20	
AX24242	Mercury, Total by CVAA	mg/L	0.0000530	0.0005	0.004	0.00377	0.00383	0.00379	0.0034 to 0.0046	94.3	70 to 130	1.62	20	
AX24242	Beryllium, Total	mg/L	0.0000101	0.00132	0.10	0.104	0.102	0.111	0.085 to 0.115	104	70 to 130	1.84	20	
AX24242	Molybdenum, Total	mg/L	0.00000863	0.0044	0.10	0.0917	0.0906	0.0945	0.085 to 0.115	91.7	70 to 130	1.23	20	
AX24242	Arsenic, Total	mg/L	0.00000907	0.0022	0.10	0.100	0.0985	0.107	0.085 to 0.115	100	70 to 130	1.81	20	
AX24242	Calcium, Total	mg/L	-0.00648	0.22	5.00	4.78	4.84	4.98	4.25 to 5.75	95.5	70 to 130	1.23	20	
AX24242	Cadmium, Total	mg/L	0.00000197	0.00066	0.10	0.103	0.101	0.103	0.085 to 0.115	103	70 to 130	1.86	20	
AX24242	Selenium, Total	mg/L	0.000118	0.0044	0.10	0.104	0.104	0.111	0.085 to 0.115	104	70 to 130	0.228	20	
AX24242	Thallium, Total	mg/L	0.00000505	0.00044	0.10	0.101	0.0998	0.101	0.085 to 0.115	101	70 to 130	1.70	20	
AX24242	Barium, Total	mg/L	0.000000775	0.0044	0.10	0.0971	0.0972	0.0976	0.085 to 0.115	97.1	70 to 130	0.0484	20	
AX24242	Lead, Total	mg/L	0.00000503	0.0022	0.10	0.0993	0.0985	0.104	0.085 to 0.115	99.3	70 to 130	0.720	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

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFEB
 Sample Date: 14-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24242

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24262	Solids, Dissolved	mg/L	4.00	25			2610	46.0	40 to 60	1.56	5

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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

CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 10/16/2017 13:00

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): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions"/>
Comments	<input type="text" value="All anions outsourced to Test America, Pensacola"/>

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/14/2017	08:00	4	Groundwater		AX24234
MW-14	10/14/2017	09:00	4	Groundwater		AX24235
MW-15	10/14/2017	09:50	4	Groundwater		AX24236
FB-1	10/14/2017	09:35	4	Field Blank		AX24237
MW-16	10/14/2017	10:57	4	Groundwater		AX24238
MW-16 Dup	10/14/2017	10:57	4	Sample Duplicate		AX24239
MW-19	10/14/2017	12:02	4	Groundwater		AX24240
MW-20	10/14/2017	13:00	4	Groundwater		AX24241
EB-1	10/14/2017	13:25	4	Equipment Blank		AX24242

Relinquished By	Received By	Date/Time
 	 Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkkorne@southemco.com, c=US Date: 2017.10.16 18:15:29 -0500</small>	<input type="text" value="10/16/2017 14:00"/> <input type="text" value="10/16/2017 18:15"/>

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="4677-23342-4-1"/>	Cooler Temp
		<input type="text" value="0.5 degrees C"/>
		Thermometer ID
		<input type="text" value="6035-30997-2-2"/>
		pH Strip ID
		<input type="text" value="6153-32040-10-7"/>



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/16/2017 14:00

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 (500mL): TDS, Bottle 4 (250mL): Anions		
Comments	All anions outsourced to Test America, Pensacola		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	10/14/2017	08:18	4	Groundwater		AX24227
MW-6	10/14/2017	09:22	4	Groundwater		AX24228
MW-7	10/14/2017	10:35	4	Groundwater		AX24229
MW-8	10/14/2017	11:29	4	Groundwater		AX24230
MW-18	10/14/2017	12:44	4	Groundwater		AX24231
MW-6DUP	10/14/2017	09:22	4	Sample Duplicate		AX24232
FB-2	10/14/2017	13:01	4	Field Blank		AX24233

Relinquished By	Received By	Date/Time
		10/16/2017 11:15
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkorneg@southernco.com, c=US Date: 2017.10.16 18:19:00 -0500</small>	10/16/2017 18:19

SmarTroll ID	5141-26150-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20009-2-1	Cooler Temp
		0.5 degrees C
		Thermometer ID
		6035-30997-2-2
		pH Strip ID
		6153-32040-10-7

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: 400-144723-4

TestAmerica SDG: Plant Gorgas CCB Landfills

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:

10/31/2017 5:55:32 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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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: 400-144723-4
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-4

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-4

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 374155 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits. RPD Limit is 4, RPD value is 17.

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373428 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 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX24230 MW-8 (400-144723-52). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373081 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: AX24227 MW-5 (400-144723-49), (400-144674-A-1), (400-144674-A-1 MS), (400-144674-A-1 MSD), AX24228 MW-6 (400-144723-50), AX24228 MW-6 (400-144723-50[MS]), AX24228 MW-6 (400-144723-50[MSD]), AX24229 MW-7 (400-144723-51), AX24230 MW-8 (400-144723-52), (400-144723-A-127), (400-144723-A-127 MS), (400-144723-A-127 MSD)AX24231 MW-18 (400-144723-53), (400-144723-A-53 MS), (400-144723-A-53 MSD), AX24232 MW-6 DUP (400-144723-54), AX24234 MW-13 (400-144723-56), AX24235 MW-14 (400-144723-57), AX24236 MW-15 (400-144723-58), AX24238 MW-16 (400-144723-60), AX24239 MW-16 DUP (400-144723-61), AX24240 MW-19 (400-144723-62) and AX24241 MW-20 (400-144723-63). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373750 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373759 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: 400-144723-4
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24227 MW-5

Lab Sample ID: 400-144723-49

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
Fluoride	0.37		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		350	98	mg/L	70		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24228 MW-6

Lab Sample ID: 400-144723-50

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.8	F1	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.14	F2	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1900	F1	300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24229 MW-7

Lab Sample ID: 400-144723-51

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	33		2.0	0.60	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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24230 MW-8

Lab Sample ID: 400-144723-52

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	140		10	3.0	mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24231 MW-18

Lab Sample ID: 400-144723-53

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.0	J	2.0	0.60	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	1800	F1	300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24232 MW-6 DUP

Lab Sample ID: 400-144723-54

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	0.14		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24233 FB-2

Lab Sample ID: 400-144723-55

No Detections.

Client Sample ID: AX24234 MW-13

Lab Sample ID: 400-144723-56

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	0.21		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		300	84	mg/L	60		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: 400-144723-4
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24235 MW-14

Lab Sample ID: 400-144723-57

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3	J	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	1700		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24236 MW-15

Lab Sample ID: 400-144723-58

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.1	J	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.37		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1500		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24237 FB-1

Lab Sample ID: 400-144723-59

No Detections.

Client Sample ID: AX24238 MW-16

Lab Sample ID: 400-144723-60

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		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	1200	^	380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24239 MW-16 DUP

Lab Sample ID: 400-144723-61

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.5		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	1300		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24240 MW-19

Lab Sample ID: 400-144723-62

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
Fluoride	0.34		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24241 MW-20

Lab Sample ID: 400-144723-63

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		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	1500		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24242 EB-1

Lab Sample ID: 400-144723-64

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: 400-144723-4
SDG: Plant Gorgas CCB Landfills

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



Sample Summary

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

TestAmerica Job ID: 400-144723-4
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-49	AX24227 MW-5	Water	10/14/17 08:18	10/18/17 10:35
400-144723-50	AX24228 MW-6	Water	10/14/17 09:22	10/18/17 10:35
400-144723-51	AX24229 MW-7	Water	10/14/17 10:35	10/18/17 10:35
400-144723-52	AX24230 MW-8	Water	10/14/17 11:29	10/18/17 10:35
400-144723-53	AX24231 MW-18	Water	10/14/17 12:44	10/18/17 10:35
400-144723-54	AX24232 MW-6 DUP	Water	10/14/17 09:22	10/18/17 10:35
400-144723-55	AX24233 FB-2	Water	10/14/17 13:01	10/18/17 10:35
400-144723-56	AX24234 MW-13	Water	10/14/17 08:00	10/18/17 10:35
400-144723-57	AX24235 MW-14	Water	10/14/17 09:00	10/18/17 10:35
400-144723-58	AX24236 MW-15	Water	10/14/17 09:50	10/18/17 10:35
400-144723-59	AX24237 FB-1	Water	10/14/17 09:35	10/18/17 10:35
400-144723-60	AX24238 MW-16	Water	10/14/17 10:57	10/18/17 10:35
400-144723-61	AX24239 MW-16 DUP	Water	10/14/17 10:57	10/18/17 10:35
400-144723-62	AX24240 MW-19	Water	10/14/17 12:02	10/18/17 10:35
400-144723-63	AX24241 MW-20	Water	10/14/17 13:00	10/18/17 10:35
400-144723-64	AX24242 EB-1	Water	10/14/17 13:25	10/18/17 10:35

Client Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24227 MW-5

Lab Sample ID: 400-144723-49

Date Collected: 10/14/17 08:18

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.4		2.0	0.60	mg/L			10/26/17 11:30	1
Fluoride	0.37		0.10	0.032	mg/L			10/31/17 12:45	1
Sulfate	2300		350	98	mg/L			10/24/17 14:33	70

Client Sample ID: AX24228 MW-6

Lab Sample ID: 400-144723-50

Date Collected: 10/14/17 09:22

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.8	F1	2.0	0.60	mg/L			10/26/17 11:29	1
Fluoride	0.14	F2	0.10	0.032	mg/L			10/31/17 15:23	1
Sulfate	1900	F1	300	84	mg/L			10/28/17 16:07	60

Client Sample ID: AX24229 MW-7

Lab Sample ID: 400-144723-51

Date Collected: 10/14/17 10:35

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33		2.0	0.60	mg/L			10/26/17 11:31	1
Fluoride	0.20		0.10	0.032	mg/L			10/31/17 13:14	1
Sulfate	1300		300	84	mg/L			10/28/17 16:07	60

Client Sample ID: AX24230 MW-8

Lab Sample ID: 400-144723-52

Date Collected: 10/14/17 11:29

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		10	3.0	mg/L			10/26/17 11:42	5
Fluoride	0.22		0.10	0.032	mg/L			10/31/17 13:16	1
Sulfate	1400		300	84	mg/L			10/28/17 16:07	60

Client Sample ID: AX24231 MW-18

Lab Sample ID: 400-144723-53

Date Collected: 10/14/17 12:44

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	J	2.0	0.60	mg/L			10/28/17 09:43	1
Fluoride	0.32		0.10	0.032	mg/L			10/31/17 13:18	1
Sulfate	1800	F1	300	84	mg/L			10/28/17 13:05	60

Client Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24232 MW-6 DUP

Lab Sample ID: 400-144723-54

Date Collected: 10/14/17 09:22

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			10/28/17 09:43	1
Fluoride	0.14		0.10	0.032	mg/L			10/31/17 13:20	1
Sulfate	1800		300	84	mg/L			10/28/17 13:05	60

Client Sample ID: AX24233 FB-2

Lab Sample ID: 400-144723-55

Date Collected: 10/14/17 13:01

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/28/17 09:43	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 13:23	1
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 12:09	1

Client Sample ID: AX24234 MW-13

Lab Sample ID: 400-144723-56

Date Collected: 10/14/17 08:00

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6	J	2.0	0.60	mg/L			10/28/17 09:43	1
Fluoride	0.21		0.10	0.032	mg/L			10/31/17 13:25	1
Sulfate	1800		300	84	mg/L			10/28/17 13:05	60

Client Sample ID: AX24235 MW-14

Lab Sample ID: 400-144723-57

Date Collected: 10/14/17 09:00

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3	J	2.0	0.60	mg/L			10/28/17 09:43	1
Fluoride	0.26		0.10	0.032	mg/L			10/31/17 13:39	1
Sulfate	1700		300	84	mg/L			10/28/17 13:05	60

Client Sample ID: AX24236 MW-15

Lab Sample ID: 400-144723-58

Date Collected: 10/14/17 09:50

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.1	J	2.0	0.60	mg/L			10/28/17 09:43	1
Fluoride	0.37		0.10	0.032	mg/L			10/31/17 13:41	1
Sulfate	1500		300	84	mg/L			10/28/17 13:10	60

Client Sample ID: AX24237 FB-1

Lab Sample ID: 400-144723-59

Date Collected: 10/14/17 09:35

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/28/17 09:43	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24237 FB-1

Lab Sample ID: 400-144723-59

Date Collected: 10/14/17 09:35

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 13:44	1
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 12:10	1

Client Sample ID: AX24238 MW-16

Lab Sample ID: 400-144723-60

Date Collected: 10/14/17 10:57

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.4		2.0	0.60	mg/L			10/28/17 09:43	1
Fluoride	0.18		0.10	0.032	mg/L			10/31/17 13:46	1
Sulfate	1200	^	380	110	mg/L			10/28/17 13:50	75

Client Sample ID: AX24239 MW-16 DUP

Lab Sample ID: 400-144723-61

Date Collected: 10/14/17 10:57

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.5		2.0	0.60	mg/L			10/28/17 09:45	1
Fluoride	0.18		0.10	0.032	mg/L			10/31/17 13:48	1
Sulfate	1300		380	110	mg/L			10/28/17 13:10	75

Client Sample ID: AX24240 MW-19

Lab Sample ID: 400-144723-62

Date Collected: 10/14/17 12:02

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/28/17 09:45	1
Fluoride	0.34		0.10	0.032	mg/L			10/31/17 13:51	1
Sulfate	2300		380	110	mg/L			10/28/17 13:10	75

Client Sample ID: AX24241 MW-20

Lab Sample ID: 400-144723-63

Date Collected: 10/14/17 13:00

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		2.0	0.60	mg/L			10/28/17 09:45	1
Fluoride	0.13		0.10	0.032	mg/L			10/31/17 13:53	1
Sulfate	1500		300	84	mg/L			10/28/17 13:10	60

Client Sample ID: AX24242 EB-1

Lab Sample ID: 400-144723-64

Date Collected: 10/14/17 13:25

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/28/17 09:45	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 14:21	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144723-4
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24242 EB-1

Lab Sample ID: 400-144723-64

Date Collected: 10/14/17 13:25

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 12:16	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-4
SDG: Plant Gorgas CCB Landfills

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

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: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24227 MW-5
Date Collected: 10/14/17 08:18
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-49
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373428	10/26/17 11:30	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374086	10/31/17 12:45	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		70	373081	10/24/17 14:33	RRC	TAL PEN

Client Sample ID: AX24228 MW-6
Date Collected: 10/14/17 09:22
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-50
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373428	10/26/17 11:29	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 16:07	JLB	TAL PEN

Client Sample ID: AX24229 MW-7
Date Collected: 10/14/17 10:35
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-51
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373428	10/26/17 11:31	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 16:07	JLB	TAL PEN

Client Sample ID: AX24230 MW-8
Date Collected: 10/14/17 11:29
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-52
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		5	373428	10/26/17 11:42	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:16	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 16:07	JLB	TAL PEN

Client Sample ID: AX24231 MW-18
Date Collected: 10/14/17 12:44
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-53
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:43	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:18	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:05	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-4
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24232 MW-6 DUP

Lab Sample ID: 400-144723-54

Date Collected: 10/14/17 09:22

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:43	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:20	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:05	JLB	TAL PEN

Client Sample ID: AX24233 FB-2

Lab Sample ID: 400-144723-55

Date Collected: 10/14/17 13:01

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:43	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373735	10/28/17 12:09	JLB	TAL PEN

Client Sample ID: AX24234 MW-13

Lab Sample ID: 400-144723-56

Date Collected: 10/14/17 08:00

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:43	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:25	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:05	JLB	TAL PEN

Client Sample ID: AX24235 MW-14

Lab Sample ID: 400-144723-57

Date Collected: 10/14/17 09:00

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:43	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:39	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:05	JLB	TAL PEN

Client Sample ID: AX24236 MW-15

Lab Sample ID: 400-144723-58

Date Collected: 10/14/17 09:50

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:43	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:41	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:10	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-4
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24237 FB-1

Lab Sample ID: 400-144723-59

Date Collected: 10/14/17 09:35

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:43	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:44	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373735	10/28/17 12:10	JLB	TAL PEN

Client Sample ID: AX24238 MW-16

Lab Sample ID: 400-144723-60

Date Collected: 10/14/17 10:57

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:43	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	373735	10/28/17 13:50	JLB	TAL PEN

Client Sample ID: AX24239 MW-16 DUP

Lab Sample ID: 400-144723-61

Date Collected: 10/14/17 10:57

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:45	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:48	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	373735	10/28/17 13:10	JLB	TAL PEN

Client Sample ID: AX24240 MW-19

Lab Sample ID: 400-144723-62

Date Collected: 10/14/17 12:02

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:45	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	373735	10/28/17 13:10	JLB	TAL PEN

Client Sample ID: AX24241 MW-20

Lab Sample ID: 400-144723-63

Date Collected: 10/14/17 13:00

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:45	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374103	10/31/17 13:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:10	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-4
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24242 EB-1

Lab Sample ID: 400-144723-64

Date Collected: 10/14/17 13:25

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:45	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:21	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373735	10/28/17 12:16	JLB	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: 400-144723-4
SDG: Plant Gorgas CCB Landfills

General Chemistry

Analysis Batch: 373081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-49	AX24227 MW-5	Total/NA	Water	SM 4500 SO4 E	
MB 400-373081/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-373081/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-373081/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144674-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-144674-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 373428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-49	AX24227 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-144723-50	AX24228 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144723-51	AX24229 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-144723-52	AX24230 MW-8	Total/NA	Water	SM 4500 Cl- E	
MB 400-373428/15	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-373428/16	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-373428/12	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144723-50 MS	AX24228 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144723-50 MSD	AX24228 MW-6	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 373712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-53	AX24231 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-144723-54	AX24232 MW-6 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144723-55	AX24233 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-144723-56	AX24234 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-144723-57	AX24235 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-144723-58	AX24236 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144723-59	AX24237 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-144723-60	AX24238 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-144723-61	AX24239 MW-16 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144723-62	AX24240 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144723-63	AX24241 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144723-64	AX24242 EB-1	Total/NA	Water	SM 4500 Cl- E	
MB 400-373712/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-373712/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-373712/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144723-53 MS	AX24231 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-144723-53 MSD	AX24231 MW-18	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 373735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-53	AX24231 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-144723-54	AX24232 MW-6 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144723-55	AX24233 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-144723-56	AX24234 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-144723-57	AX24235 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-144723-58	AX24236 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144723-59	AX24237 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-144723-60	AX24238 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-144723-61	AX24239 MW-16 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144723-62	AX24240 MW-19	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: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 373735 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-63	AX24241 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144723-64	AX24242 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-373735/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-373735/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-373735/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 373750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-373750/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-373750/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-373750/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144723-53 MS	AX24231 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-144723-53 MSD	AX24231 MW-18	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 373759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-50	AX24228 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144723-51	AX24229 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-144723-52	AX24230 MW-8	Total/NA	Water	SM 4500 SO4 E	
MB 400-373759/5	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-373759/6	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-373759/9	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144723-50 MS	AX24228 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144723-50 MSD	AX24228 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144723-A-127 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-144723-A-127 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 374086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-49	AX24227 MW-5	Total/NA	Water	SM 4500 F C	
MB 400-374086/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374086/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-A-3 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144729-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-144729-A-25 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-51	AX24229 MW-7	Total/NA	Water	SM 4500 F C	
400-144723-52	AX24230 MW-8	Total/NA	Water	SM 4500 F C	
400-144723-53	AX24231 MW-18	Total/NA	Water	SM 4500 F C	
400-144723-54	AX24232 MW-6 DUP	Total/NA	Water	SM 4500 F C	
400-144723-55	AX24233 FB-2	Total/NA	Water	SM 4500 F C	
400-144723-56	AX24234 MW-13	Total/NA	Water	SM 4500 F C	
400-144723-57	AX24235 MW-14	Total/NA	Water	SM 4500 F C	
400-144723-58	AX24236 MW-15	Total/NA	Water	SM 4500 F C	
400-144723-59	AX24237 FB-1	Total/NA	Water	SM 4500 F C	
400-144723-60	AX24238 MW-16	Total/NA	Water	SM 4500 F C	
400-144723-61	AX24239 MW-16 DUP	Total/NA	Water	SM 4500 F C	
400-144723-62	AX24240 MW-19	Total/NA	Water	SM 4500 F C	
400-144723-63	AX24241 MW-20	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: 400-144723-4
SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 374103 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-374103/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374103/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-A-12 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144729-A-12 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
660-83395-C-2 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-83395-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-64	AX24242 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-374123/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374123/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-A-19 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144729-A-19 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-50	AX24228 MW-6	Total/NA	Water	SM 4500 F C	
MB 400-374155/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374155/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144723-50 MS	AX24228 MW-6	Total/NA	Water	SM 4500 F C	
400-144723-50 MSD	AX24228 MW-6	Total/NA	Water	SM 4500 F C	

QC Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-373428/15
Matrix: Water
Analysis Batch: 373428

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			10/26/17 11:14	1

Lab Sample ID: LCS 400-373428/16
Matrix: Water
Analysis Batch: 373428

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	30.2		mg/L		101	90 - 110

Lab Sample ID: MRL 400-373428/12
Matrix: Water
Analysis Batch: 373428

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: 400-144723-50 MS
Matrix: Water
Analysis Batch: 373428

Client Sample ID: AX24228 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.8	F1	10.0	14.0		mg/L		112	73 - 120

Lab Sample ID: 400-144723-50 MSD
Matrix: Water
Analysis Batch: 373428

Client Sample ID: AX24228 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	2.8	F1	10.0	13.8		mg/L		110	73 - 120	2	8

Lab Sample ID: MB 400-373712/6
Matrix: Water
Analysis Batch: 373712

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			10/28/17 09:00	1

Lab Sample ID: LCS 400-373712/7
Matrix: Water
Analysis Batch: 373712

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	30.4		mg/L		101	90 - 110

Lab Sample ID: MRL 400-373712/3
Matrix: Water
Analysis Batch: 373712

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	2.13		mg/L		107	50 - 150

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144723-53 MS
Matrix: Water
Analysis Batch: 373712

Client Sample ID: AX24231 MW-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.0	J	10.0	12.2		mg/L		112	73 - 120

Lab Sample ID: 400-144723-53 MSD
Matrix: Water
Analysis Batch: 373712

Client Sample ID: AX24231 MW-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.0	J	10.0	12.4		mg/L		113	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-374086/3
Matrix: Water
Analysis Batch: 374086

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			10/31/17 11:49	1

Lab Sample ID: LCS 400-374086/4
Matrix: Water
Analysis Batch: 374086

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	3.82		mg/L		96	90 - 110

Lab Sample ID: 400-144729-A-3 MS
Matrix: Water
Analysis Batch: 374086

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
Fluoride	0.37		1.00	1.36		mg/L		99	75 - 125

Lab Sample ID: 400-144729-A-3 MSD
Matrix: Water
Analysis Batch: 374086

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
Fluoride	0.37		1.00	1.33		mg/L		96	75 - 125	2	4

Lab Sample ID: 400-144729-A-25 DU
Matrix: Water
Analysis Batch: 374086

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.19		0.190		mg/L		0	4

QC Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: MB 400-374103/3
Matrix: Water
Analysis Batch: 374103

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			10/31/17 13:00	1

Lab Sample ID: LCS 400-374103/4
Matrix: Water
Analysis Batch: 374103

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	3.82		mg/L		96	90 - 110

Lab Sample ID: 400-144729-A-12 MS
Matrix: Water
Analysis Batch: 374103

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
Fluoride	0.15		1.00	1.12		mg/L		97	75 - 125

Lab Sample ID: 400-144729-A-12 MSD
Matrix: Water
Analysis Batch: 374103

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
Fluoride	0.15		1.00	1.12		mg/L		97	75 - 125	0	4

Lab Sample ID: 660-83395-C-2 MS
Matrix: Water
Analysis Batch: 374103

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
Fluoride	0.13		1.00	1.17		mg/L		104	75 - 125

Lab Sample ID: 660-83395-C-2 MSD
Matrix: Water
Analysis Batch: 374103

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
Fluoride	0.13		1.00	1.17		mg/L		104	75 - 125	0	4

Lab Sample ID: MB 400-374123/3
Matrix: Water
Analysis Batch: 374123

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			10/31/17 14:06	1

Lab Sample ID: LCS 400-374123/4
Matrix: Water
Analysis Batch: 374123

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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144729-A-19 MS
Matrix: Water
Analysis Batch: 374123

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
Fluoride	0.36		1.00	1.33		mg/L		97	75 - 125

Lab Sample ID: 400-144729-A-19 MSD
Matrix: Water
Analysis Batch: 374123

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
Fluoride	0.36		1.00	1.33		mg/L		97	75 - 125	0	4

Lab Sample ID: MB 400-374155/3
Matrix: Water
Analysis Batch: 374155

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			10/31/17 15:15	1

Lab Sample ID: LCS 400-374155/4
Matrix: Water
Analysis Batch: 374155

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: 400-144723-50 MS
Matrix: Water
Analysis Batch: 374155

Client Sample ID: AX24228 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.14	F2	1.00	1.12		mg/L		98	75 - 125

Lab Sample ID: 400-144723-50 MSD
Matrix: Water
Analysis Batch: 374155

Client Sample ID: AX24228 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	0.14	F2	1.00	0.940	F2	mg/L		80	75 - 125	17	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-373081/6
Matrix: Water
Analysis Batch: 373081

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			10/24/17 12:39	1

QC Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: LCS 400-373081/7
Matrix: Water
Analysis Batch: 373081

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	13.8		mg/L		92	90 - 110

Lab Sample ID: MRL 400-373081/3
Matrix: Water
Analysis Batch: 373081

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	4.09	J	mg/L		82	50 - 150

Lab Sample ID: 400-144674-A-1 MS
Matrix: Water
Analysis Batch: 373081

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	390	F1	200	382	F1	mg/L		-4	77 - 128

Lab Sample ID: 400-144674-A-1 MSD
Matrix: Water
Analysis Batch: 373081

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	390	F1	200	380	F1	mg/L		-5	77 - 128	1	5

Lab Sample ID: MB 400-373735/6
Matrix: Water
Analysis Batch: 373735

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			10/28/17 11:55	1

Lab Sample ID: LCS 400-373735/7
Matrix: Water
Analysis Batch: 373735

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	14.4		mg/L		96	90 - 110

Lab Sample ID: MRL 400-373735/3
Matrix: Water
Analysis Batch: 373735

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	3.80	J	mg/L		76	50 - 150

Lab Sample ID: MB 400-373750/6
Matrix: Water
Analysis Batch: 373750

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			10/28/17 14:06	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: LCS 400-373750/7
Matrix: Water
Analysis Batch: 373750

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	13.5		mg/L		90	90 - 110

Lab Sample ID: MRL 400-373750/3
Matrix: Water
Analysis Batch: 373750

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	3.67	J	mg/L		73	50 - 150

Lab Sample ID: 400-144723-53 MS
Matrix: Water
Analysis Batch: 373750

Client Sample ID: AX24231 MW-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1800	F1	600	1820	F1	mg/L		7	77 - 128

Lab Sample ID: 400-144723-53 MSD
Matrix: Water
Analysis Batch: 373750

Client Sample ID: AX24231 MW-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1800	F1	600	1730	F1	mg/L		-7	77 - 128	5	5

Lab Sample ID: MB 400-373759/5
Matrix: Water
Analysis Batch: 373759

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			10/28/17 15:32	1

Lab Sample ID: LCS 400-373759/6
Matrix: Water
Analysis Batch: 373759

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	13.8		mg/L		92	90 - 110

Lab Sample ID: MRL 400-373759/9
Matrix: Water
Analysis Batch: 373759

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	4.00	J	mg/L		80	50 - 150

Lab Sample ID: 400-144723-50 MS
Matrix: Water
Analysis Batch: 373759

Client Sample ID: AX24228 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1900	F1	600	1730	F1	mg/L		-21	77 - 128

QC Sample Results

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

TestAmerica Job ID: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: 400-144723-50 MSD

Matrix: Water

Analysis Batch: 373759

Client Sample ID: AX24228 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
Sulfate	1900	F1	600	1740	F1	mg/L		-20	77 - 128	0	5

Lab Sample ID: 400-144723-A-127 MS

Matrix: Water

Analysis Batch: 373759

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	1400	F1	600	1380	F1	mg/L		-9	77 - 128		

Lab Sample ID: 400-144723-A-127 MSD

Matrix: Water


Analysis Batch: 373759

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	1400	F1	600	1360	F1	mg/L		-14	77 - 128	2	5

Chain of Custody Record

Client Information Client Contact: Keith Komegay Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Calera State, Zip: AL, 35040 Phone: 205-664-6004 Email: kkomegay@southalpower.com Project Name: CCR Site: Gorgas Landfill		Lab P.M.: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Lab P.M.: E-Mail:		Sampler: Nick Pitts / Anthony Goggin Phone:		COC No: 400-56525-24537.1 Page: Page 1 of 1 Job #:					
Due Date Requested: 11/1/2017 TAT Requested (days): Routine		PO #: 4000 7143 WO #:		Project #:		SOW#:					
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soild, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM 4500 F ₁ C	SM 4500 Cl ₁ E	SM 4500 SO ₄ E	Total Number of Containers	Special Instructions/Note:
AX24227	10/14/17	0818	G	Water		N	x	x	x	1	MW-5
AX24228	10/14/17	0922	G	Water		Y	x	x	x	1	MW-6
AX24229	10/14/17	1035	G	Water		x	x	x	x	1	MW-7
AX24230	10/14/17	1129	G	Water		x	x	x	x	1	MW-8
AX24231	10/14/17	1244	G	Water		x	x	x	x	1	MW-18
AX24232	10/14/17	0922	G	Water		x	x	x	x	1	MW-6DUP (Sample Duplicate)
AX24233	10/14/17	1301	G	Water		x	x	x	x	1	FB-2 (Field Blank)
AX24234	10/14/17	0800	G	Water		x	x	x	x	1	MW-13
Possible Hazard Identification <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: Relinquished by: Keith Komegay		Date/Time: 10/17/17 12:00		Company: APC		Received by: 		Date/Time: 10-18-17 1035		Company: TA	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Custody Seal No.:											
Cooler Temperature(s) °C and Other Remarks: 3.3 C IR 10											



Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s):		COC No: 400-56525-24537.1																																																																							
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8 City: Calera State, Zip: AL, 35040 Phone: 205-664-6004 E-mail: kkkorneg@southernco.com		Sampler: Nick Pitts Phone: Keith Kornegey		Page: Page 1 of 1 Job #:																																																																							
Due Date Requested: 11/1/2017 TAT Requested (days): Routine		PO #: WO #: Project #: 40007143 SSOW#:		Analysis Requested																																																																									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Sample Identification</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=grab)</th> <th>Matrix (Water, Sewage, Overstool, BT/Tissue, Ash)</th> <th>Preservation Code:</th> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> </tr> </thead> <tbody> <tr> <td>AX24235</td> <td>10/14/17</td> <td>0900</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>AX24236</td> <td>10/14/17</td> <td>0950</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>AX24237</td> <td>10/14/17</td> <td>0935</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>AX24238</td> <td>10/14/17</td> <td>1057</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>AX24239</td> <td>10/14/17</td> <td>1057</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>AX24240</td> <td>10/14/17</td> <td>1202</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td>AX24241</td> <td>10/14/17</td> <td>1300</td> <td>G</td> <td>Water</td> <td></td> <td>Y</td> <td>X</td> </tr> <tr> <td>AX24242</td> <td>10/14/17</td> <td>1325</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> </tr> </tbody> </table>		Sample Identification	Sample Date					Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sewage, Overstool, BT/Tissue, Ash)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	AX24235	10/14/17	0900	G	Water		X	X	AX24236	10/14/17	0950	G	Water		X	X	AX24237	10/14/17	0935	G	Water		X	X	AX24238	10/14/17	1057	G	Water		X	X	AX24239	10/14/17	1057	G	Water		X	X	AX24240	10/14/17	1202	G	Water		X	X	AX24241	10/14/17	1300	G	Water		Y	X	AX24242	10/14/17	1325	G	Water		X	X
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sewage, Overstool, BT/Tissue, Ash)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)																																																																						
AX24235	10/14/17	0900	G	Water		X	X																																																																						
AX24236	10/14/17	0950	G	Water		X	X																																																																						
AX24237	10/14/17	0935	G	Water		X	X																																																																						
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AX24240	10/14/17	1202	G	Water		X	X																																																																						
AX24241	10/14/17	1300	G	Water		Y	X																																																																						
AX24242	10/14/17	1325	G	Water		X	X																																																																						

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

Empty Kit Relinquished by: Relinquished by: Keith Kornegey
 Date/Time: 10/17/17 12:00
 Company: APC

Relinquished by: Date/Time: Company:
 Relinquished by: Date/Time: Company:
 Relinquished by: Date/Time: Company:

Custody Seals Intact: Custody Seal No.:
 Date/Time: 10.18.17 1035
 Received by: [Signature] Company: TA
 Date/Time: Date/Time: Company:
 Cooler Temperature (°C) and Other Remarks: 3.3C FR 7 TO

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:

Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-4
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

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	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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 <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: 400-144723-4
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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

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: 400-144723-3

TestAmerica SDG: Plant Gorgas CCB Landfills

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:

11/16/2017 2:18:06 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-144723-3
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-3

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-3

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-333413. The following samples were reduced due to limited volume: AX24211 MW-5 (400-144723-33), AX24212 MW-6 (400-144723-34), AX24213 MW-7 (400-144723-35), AX24213 MW-7 (400-144723-35[MS]), AX24213 MW-7 (400-144723-35[MSD]), AX24214 MW-8 (400-144723-36), AX24215 MW-18 (400-144723-37), AX24216 MW-6 DUP (400-144723-38), AX24217 FB-2 (400-144723-39), AX24218 MW-13 (400-144723-40), AX24219 MW-14 (400-144723-41), AX24220 MW-15 (400-144723-42), AX24221 FB-1 (400-144723-43), AX24222 MW-16 (400-144723-44), AX24223 MW-16 DUP (400-144723-45), AX24224 MW-19 (400-144723-46), AX24225 MW-20 (400-144723-47) and AX24226 EB-1 (400-144723-48).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-333409. The following samples were reduced due to limited volume: AX24211 MW-5 (400-144723-33), AX24212 MW-6 (400-144723-34), AX24213 MW-7 (400-144723-35), AX24213 MW-7 (400-144723-35[MS]), AX24213 MW-7 (400-144723-35[MSD]), AX24214 MW-8 (400-144723-36), AX24215 MW-18 (400-144723-37), AX24216 MW-6 DUP (400-144723-38), AX24217 FB-2 (400-144723-39), AX24218 MW-13 (400-144723-40), AX24219 MW-14 (400-144723-41), AX24220 MW-15 (400-144723-42), AX24221 FB-1 (400-144723-43), AX24222 MW-16 (400-144723-44), AX24223 MW-16 DUP (400-144723-45), AX24224 MW-19 (400-144723-46), AX24225 MW-20 (400-144723-47) and AX24226 EB-1 (400-144723-48).

Method Summary

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

TestAmerica Job ID: 400-144723-3
SDG: Plant Gorgas CCB Landfills

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: 400-144723-3
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-33	AX24211 MW-5	Water	10/14/17 08:18	10/18/17 10:35
400-144723-34	AX24212 MW-6	Water	10/14/17 09:22	10/18/17 10:35
400-144723-35	AX24213 MW-7	Water	10/14/17 10:35	10/18/17 10:35
400-144723-36	AX24214 MW-8	Water	10/14/17 11:29	10/18/17 10:35
400-144723-37	AX24215 MW-18	Water	10/14/17 12:44	10/18/17 10:35
400-144723-38	AX24216 MW-6 DUP	Water	10/14/17 09:22	10/18/17 10:35
400-144723-39	AX24217 FB-2	Water	10/14/17 13:01	10/18/17 10:35
400-144723-40	AX24218 MW-13	Water	10/14/17 08:00	10/18/17 10:35
400-144723-41	AX24219 MW-14	Water	10/14/17 09:00	10/18/17 10:35
400-144723-42	AX24220 MW-15	Water	10/14/17 09:50	10/18/17 10:35
400-144723-43	AX24221 FB-1	Water	10/14/17 09:35	10/18/17 10:35
400-144723-44	AX24222 MW-16	Water	10/14/17 10:57	10/18/17 10:35
400-144723-45	AX24223 MW-16 DUP	Water	10/14/17 10:57	10/18/17 10:35
400-144723-46	AX24224 MW-19	Water	10/14/17 12:02	10/18/17 10:35
400-144723-47	AX24225 MW-20	Water	10/14/17 13:00	10/18/17 10:35
400-144723-48	AX24226 EB-1	Water	10/14/17 13:25	10/18/17 10:35

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24211 MW-5

Lab Sample ID: 400-144723-33

Date Collected: 10/14/17 08:18

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.149		0.0779	0.0790	1.00	0.0808	pCi/L	10/23/17 12:23	11/14/17 17:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/23/17 12:23	11/14/17 17:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.05		0.306	0.321	1.00	0.378	pCi/L	10/23/17 12:48	10/30/17 09:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/23/17 12:48	10/30/17 09:34	1
Y Carrier	90.5		40 - 110					10/23/17 12:48	10/30/17 09:34	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	1.20		0.316	0.331	5.00	0.378	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24212 MW-6

Lab Sample ID: 400-144723-34

Date Collected: 10/14/17 09:22

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.320		0.108	0.111	1.00	0.0766	pCi/L	10/23/17 12:23	11/14/17 17:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/23/17 12:23	11/14/17 17:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.27		0.358	0.377	1.00	0.453	pCi/L	10/23/17 12:48	10/30/17 09:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/23/17 12:48	10/30/17 09:34	1
Y Carrier	87.1		40 - 110					10/23/17 12:48	10/30/17 09:34	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	1.59		0.374	0.393	5.00	0.453	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24213 MW-7

Lab Sample ID: 400-144723-35

Date Collected: 10/14/17 10:35

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0880		0.0652	0.0657	1.00	0.0850	pCi/L	10/23/17 12:23	11/14/17 17:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					10/23/17 12:23	11/14/17 17:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.342	U	0.244	0.246	1.00	0.376	pCi/L	10/23/17 12:48	10/30/17 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					10/23/17 12:48	10/30/17 09:36	1
Y Carrier	90.8		40 - 110					10/23/17 12:48	10/30/17 09:36	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		0.253	0.255	5.00	0.376	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24214 MW-8

Lab Sample ID: 400-144723-36

Date Collected: 10/14/17 11:29

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0982		0.0738	0.0743	1.00	0.0955	pCi/L	10/23/17 12:23	11/14/17 17:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/23/17 12:23	11/14/17 17:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.50		0.374	0.399	1.00	0.473	pCi/L	10/23/17 12:48	10/30/17 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/23/17 12:48	10/30/17 09:36	1
Y Carrier	96.8		40 - 110					10/23/17 12:48	10/30/17 09:36	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	1.60		0.381	0.406	5.00	0.473	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24215 MW-18

Lab Sample ID: 400-144723-37

Date Collected: 10/14/17 12:44

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00620	U	0.0512	0.0512	1.00	0.104	pCi/L	10/23/17 12:23	11/14/17 18:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/23/17 12:23	11/14/17 18:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.58		0.382	0.409	1.00	0.466	pCi/L	10/23/17 12:48	10/30/17 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/23/17 12:48	10/30/17 09:36	1
Y Carrier	90.5		40 - 110					10/23/17 12:48	10/30/17 09:36	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	1.59		0.385	0.412	5.00	0.466	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24216 MW-6 DUP

Lab Sample ID: 400-144723-38

Date Collected: 10/14/17 09:22

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.269		0.105	0.108	1.00	0.0995	pCi/L	10/23/17 12:23	11/14/17 18:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					10/23/17 12:23	11/14/17 18:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.14		0.403	0.449	1.00	0.418	pCi/L	10/23/17 12:48	10/30/17 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					10/23/17 12:48	10/30/17 09:36	1
Y Carrier	90.1		40 - 110					10/23/17 12:48	10/30/17 09:36	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	2.41		0.416	0.462	5.00	0.418	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24217 FB-2

Lab Sample ID: 400-144723-39

Date Collected: 10/14/17 13:01

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0963	U	0.0738	0.0743	1.00	0.103	pCi/L	10/23/17 12:23	11/14/17 18:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/23/17 12:23	11/14/17 18:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.323	U	0.235	0.237	1.00	0.365	pCi/L	10/23/17 12:48	10/30/17 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/23/17 12:48	10/30/17 09:36	1
Y Carrier	90.8		40 - 110					10/23/17 12:48	10/30/17 09:36	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	0.419		0.246	0.248	5.00	0.365	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24218 MW-13

Lab Sample ID: 400-144723-40

Date Collected: 10/14/17 08:00

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0885	U	0.0744	0.0748	1.00	0.109	pCi/L	10/23/17 12:23	11/14/17 18:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					10/23/17 12:23	11/14/17 18:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.07		0.403	0.446	1.00	0.432	pCi/L	10/23/17 12:48	10/30/17 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					10/23/17 12:48	10/30/17 09:36	1
Y Carrier	87.1		40 - 110					10/23/17 12:48	10/30/17 09:36	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	2.15		0.410	0.452	5.00	0.432	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24219 MW-14

Lab Sample ID: 400-144723-41

Date Collected: 10/14/17 09:00

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.177		0.0934	0.0948	1.00	0.112	pCi/L	10/23/17 12:23	11/14/17 18:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					10/23/17 12:23	11/14/17 18:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.524		0.282	0.286	1.00	0.419	pCi/L	10/23/17 12:48	10/30/17 09:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					10/23/17 12:48	10/30/17 09:41	1
Y Carrier	92.0		40 - 110					10/23/17 12:48	10/30/17 09:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.701		0.297	0.301	5.00	0.419	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24220 MW-15

Lab Sample ID: 400-144723-42

Date Collected: 10/14/17 09:50

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.124		0.0759	0.0767	1.00	0.0941	pCi/L	10/23/17 12:23	11/14/17 18:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/23/17 12:23	11/14/17 18:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.449	U	0.312	0.315	1.00	0.489	pCi/L	10/23/17 12:48	10/30/17 09:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/23/17 12:48	10/30/17 09:41	1
Y Carrier	88.6		40 - 110					10/23/17 12:48	10/30/17 09:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.573		0.321	0.324	5.00	0.489	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24221 FB-1

Lab Sample ID: 400-144723-43

Date Collected: 10/14/17 09:35

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0181	U	0.0543	0.0544	1.00	0.104	pCi/L	10/23/17 12:23	11/14/17 18:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 12:23	11/14/17 18:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.462		0.280	0.283	1.00	0.426	pCi/L	10/23/17 12:48	10/30/17 09:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 12:48	10/30/17 09:41	1
Y Carrier	89.0		40 - 110					10/23/17 12:48	10/30/17 09:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.480		0.285	0.288	5.00	0.426	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24222 MW-16

Lab Sample ID: 400-144723-44

Date Collected: 10/14/17 10:57

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0636	U	0.0681	0.0683	1.00	0.108	pCi/L	10/23/17 12:23	11/14/17 18:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/23/17 12:23	11/14/17 18:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.795		0.295	0.304	1.00	0.400	pCi/L	10/23/17 12:48	10/30/17 09:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/23/17 12:48	10/30/17 09:41	1
Y Carrier	90.8		40 - 110					10/23/17 12:48	10/30/17 09:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.858		0.303	0.312	5.00	0.400	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24223 MW-16 DUP

Lab Sample ID: 400-144723-45

Date Collected: 10/14/17 10:57

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0839	U	0.0650	0.0655	1.00	0.0887	pCi/L	10/23/17 12:23	11/14/17 18:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/23/17 12:23	11/14/17 18:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.06		0.334	0.348	1.00	0.437	pCi/L	10/23/17 12:48	10/30/17 09:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/23/17 12:48	10/30/17 09:41	1
Y Carrier	86.7		40 - 110					10/23/17 12:48	10/30/17 09:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.14		0.340	0.354	5.00	0.437	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24224 MW-19

Lab Sample ID: 400-144723-46

Date Collected: 10/14/17 12:02

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.115		0.0787	0.0793	1.00	0.104	pCi/L	10/23/17 12:23	11/14/17 18:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					10/23/17 12:23	11/14/17 18:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.640		0.290	0.296	1.00	0.411	pCi/L	10/23/17 12:48	10/30/17 09:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					10/23/17 12:48	10/30/17 09:41	1
Y Carrier	89.7		40 - 110					10/23/17 12:48	10/30/17 09:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.754		0.300	0.306	5.00	0.411	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24225 MW-20

Lab Sample ID: 400-144723-47

Date Collected: 10/14/17 13:00

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.290		0.108	0.111	1.00	0.0975	pCi/L	10/23/17 12:23	11/14/17 18:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/23/17 12:23	11/14/17 18:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.866		0.284	0.295	1.00	0.366	pCi/L	10/23/17 12:48	10/30/17 09:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/23/17 12:48	10/30/17 09:41	1
Y Carrier	92.7		40 - 110					10/23/17 12:48	10/30/17 09:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.16		0.304	0.315	5.00	0.366	pCi/L		11/15/17 16:36	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24226 EB-1

Lab Sample ID: 400-144723-48

Date Collected: 10/14/17 13:25

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00758	U	0.0399	0.0399	1.00	0.0959	pCi/L	10/23/17 12:23	11/14/17 18:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 12:23	11/14/17 18:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.980		0.303	0.316	1.00	0.390	pCi/L	10/23/17 12:48	10/30/17 09:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/23/17 12:48	10/30/17 09:41	1
Y Carrier	93.8		40 - 110					10/23/17 12:48	10/30/17 09:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.972		0.306	0.319	5.00	0.390	pCi/L		11/15/17 16:36	1

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-3
SDG: Plant Gorgas CCB Landfills

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: 400-144723-3
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24211 MW-5

Date Collected: 10/14/17 08:18

Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-33

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 17:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 09:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24212 MW-6

Date Collected: 10/14/17 09:22

Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-34

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 17:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 09:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24213 MW-7

Date Collected: 10/14/17 10:35

Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-35

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 17:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 09:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24214 MW-8

Date Collected: 10/14/17 11:29

Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-36

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336983	11/14/17 17:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 09:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-3
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24215 MW-18

Lab Sample ID: 400-144723-37

Date Collected: 10/14/17 12:44

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 09:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24216 MW-6 DUP

Lab Sample ID: 400-144723-38

Date Collected: 10/14/17 09:22

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 09:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24217 FB-2

Lab Sample ID: 400-144723-39

Date Collected: 10/14/17 13:01

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 09:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24218 MW-13

Lab Sample ID: 400-144723-40

Date Collected: 10/14/17 08:00

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 09:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24219 MW-14

Lab Sample ID: 400-144723-41

Date Collected: 10/14/17 09:00

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 09:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24220 MW-15

Lab Sample ID: 400-144723-42

Date Collected: 10/14/17 09:50

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 09:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24221 FB-1

Lab Sample ID: 400-144723-43

Date Collected: 10/14/17 09:35

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 09:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24222 MW-16

Lab Sample ID: 400-144723-44

Date Collected: 10/14/17 10:57

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 09:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-3
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24223 MW-16 DUP

Lab Sample ID: 400-144723-45

Date Collected: 10/14/17 10:57

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 09:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24224 MW-19

Lab Sample ID: 400-144723-46

Date Collected: 10/14/17 12:02

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336982	11/14/17 18:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 09:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24225 MW-20

Lab Sample ID: 400-144723-47

Date Collected: 10/14/17 13:00

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336975	11/14/17 18:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 09:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	RTM	TAL SL

Client Sample ID: AX24226 EB-1

Lab Sample ID: 400-144723-48

Date Collected: 10/14/17 13:25

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333409	10/23/17 12:23	LDE	TAL SL
Total/NA	Analysis	9315		1	336975	11/14/17 18:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333413	10/23/17 12:48	LDE	TAL SL
Total/NA	Analysis	9320		1	334708	10/30/17 09:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337399	11/15/17 16:36	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: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Rad

Prep Batch: 333409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-33	AX24211 MW-5	Total/NA	Water	PrecSep-21	
400-144723-34	AX24212 MW-6	Total/NA	Water	PrecSep-21	
400-144723-35	AX24213 MW-7	Total/NA	Water	PrecSep-21	
400-144723-36	AX24214 MW-8	Total/NA	Water	PrecSep-21	
400-144723-37	AX24215 MW-18	Total/NA	Water	PrecSep-21	
400-144723-38	AX24216 MW-6 DUP	Total/NA	Water	PrecSep-21	
400-144723-39	AX24217 FB-2	Total/NA	Water	PrecSep-21	
400-144723-40	AX24218 MW-13	Total/NA	Water	PrecSep-21	
400-144723-41	AX24219 MW-14	Total/NA	Water	PrecSep-21	
400-144723-42	AX24220 MW-15	Total/NA	Water	PrecSep-21	
400-144723-43	AX24221 FB-1	Total/NA	Water	PrecSep-21	
400-144723-44	AX24222 MW-16	Total/NA	Water	PrecSep-21	
400-144723-45	AX24223 MW-16 DUP	Total/NA	Water	PrecSep-21	
400-144723-46	AX24224 MW-19	Total/NA	Water	PrecSep-21	
400-144723-47	AX24225 MW-20	Total/NA	Water	PrecSep-21	
400-144723-48	AX24226 EB-1	Total/NA	Water	PrecSep-21	
MB 160-333409/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-333409/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-144723-35 MS	AX24213 MW-7	Total/NA	Water	PrecSep-21	
400-144723-35 MSD	AX24213 MW-7	Total/NA	Water	PrecSep-21	

Prep Batch: 333413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-33	AX24211 MW-5	Total/NA	Water	PrecSep_0	
400-144723-34	AX24212 MW-6	Total/NA	Water	PrecSep_0	
400-144723-35	AX24213 MW-7	Total/NA	Water	PrecSep_0	
400-144723-36	AX24214 MW-8	Total/NA	Water	PrecSep_0	
400-144723-37	AX24215 MW-18	Total/NA	Water	PrecSep_0	
400-144723-38	AX24216 MW-6 DUP	Total/NA	Water	PrecSep_0	
400-144723-39	AX24217 FB-2	Total/NA	Water	PrecSep_0	
400-144723-40	AX24218 MW-13	Total/NA	Water	PrecSep_0	
400-144723-41	AX24219 MW-14	Total/NA	Water	PrecSep_0	
400-144723-42	AX24220 MW-15	Total/NA	Water	PrecSep_0	
400-144723-43	AX24221 FB-1	Total/NA	Water	PrecSep_0	
400-144723-44	AX24222 MW-16	Total/NA	Water	PrecSep_0	
400-144723-45	AX24223 MW-16 DUP	Total/NA	Water	PrecSep_0	
400-144723-46	AX24224 MW-19	Total/NA	Water	PrecSep_0	
400-144723-47	AX24225 MW-20	Total/NA	Water	PrecSep_0	
400-144723-48	AX24226 EB-1	Total/NA	Water	PrecSep_0	
MB 160-333413/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-333413/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-144723-35 MS	AX24213 MW-7	Total/NA	Water	PrecSep_0	
400-144723-35 MSD	AX24213 MW-7	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-333409/1-A
Matrix: Water
Analysis Batch: 336983

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333409

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.02956	U	0.0203	0.0205	1.00	0.0871	pCi/L	10/23/17 12:23	11/14/17 17:58	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	92.9		40 - 110		10/23/17 12:23	11/14/17 17:58	1			

Lab Sample ID: LCS 160-333409/2-A
Matrix: Water
Analysis Batch: 336983

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333409

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.7	13.08		1.35	1.00	0.0702	pCi/L	83	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	98.8		40 - 110		10/23/17 12:23	11/14/17 17:58	1		

Lab Sample ID: 400-144723-35 MS
Matrix: Water
Analysis Batch: 336983

Client Sample ID: AX24213 MW-7
Prep Type: Total/NA
Prep Batch: 333409

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
						Uncert. (2σ+/-)					
Radium-226	0.0880		15.7	14.88		1.54	1.00	0.0963	pCi/L	94	75 - 138
Carrier	MS MS		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits								
Ba Carrier	94.1		40 - 110		10/23/17 12:23	11/14/17 17:58	1				

Lab Sample ID: 400-144723-35 MSD
Matrix: Water
Analysis Batch: 336983

Client Sample ID: AX24213 MW-7
Prep Type: Total/NA
Prep Batch: 333409

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
						Uncert. (2σ+/-)							
Radium-226	0.0880		15.7	13.46		1.38	1.00	0.0853	pCi/L	85	75 - 138	0.48	1
Carrier	MSD MSD		Limits		Prepared	Analyzed	Dil Fac						
Ba Carrier	%Yield	Qualifier	Limits										
Ba Carrier	97.9		40 - 110		10/23/17 12:23	11/14/17 17:58	1						

QC Sample Results

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

TestAmerica Job ID: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-333413/1-A
Matrix: Water
Analysis Batch: 334709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333413

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4575		0.273	0.277	1.00	0.410	pCi/L	10/23/17 12:48	10/30/17 09:34	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110	10/23/17 12:48	10/30/17 09:34	1
Y Carrier	89.7		40 - 110	10/23/17 12:48	10/30/17 09:34	1

Lab Sample ID: LCS 160-333413/2-A
Matrix: Water
Analysis Batch: 334709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333413

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	17.0	19.30		2.02	1.00	0.355	pCi/L	114	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	98.8		40 - 110
Y Carrier	92.0		40 - 110

Lab Sample ID: 400-144723-35 MS
Matrix: Water
Analysis Batch: 334709

Client Sample ID: AX24213 MW-7
Prep Type: Total/NA
Prep Batch: 333413

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.342	U	17.0	20.14		2.12	1.00	0.441	pCi/L	117	45 - 150

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	94.1		40 - 110
Y Carrier	91.2		40 - 110


Lab Sample ID: 400-144723-35 MSD
Matrix: Water
Analysis Batch: 334709

Client Sample ID: AX24213 MW-7
Prep Type: Total/NA
Prep Batch: 333413

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.342	U	17.0	19.48		2.05	1.00	0.386	pCi/L	113	45 - 150	0.16	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	97.9		40 - 110
Y Carrier	90.1		40 - 110

Chain of Custody Record

Client Information		Lab PM: Whitire, Cheyenne R		Carrier Tracking No(s):	
Alabama Power General Test Laboratory		Nick Pitts/Anthony Goggins		COC No: 400-56525-24537.1	
744 County Rd 87 GSC #8		Phone:		Page: Page 1 of 1	
City: Calera		E-Mail: cheyenne.whitire@testamericainc.com		Job #:	
State, Zip: AL, 35040		Due Date Requested: 11/8/2017		Analysis Requested	
Phone: 205-664-6004		TAT Requested (days):		 400-144723 COC	
Email: fkkornej@southernco.com		PO #:			
Project Name: CCR		WO #:			
Site: Gorgas Landfill		Project #: 40007143			
		SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Overwater)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note:	Preservation Codes:	
									Preservation Code:	Other:
AX24211	10/14/17	0818	G	Water	X	X	1	MW-5	M - Hexane	
AX24212	10/14/17	0922	G	Water	X	X	1	MW-6	N - None	
AX24213	10/14/17	1035	G	Water	Y	X	3	MW-7	O - AsNaO2	
AX24214	10/14/17	1129	G	Water	X	X	1	MW-8	P - Na2O4S	
AX24215	10/14/17	1244	G	Water	X	X	1	MW-18	Q - Na2SO3	
AX24216	10/14/17	0922	G	Water	X	X	1	MW-6DUP (Sample Duplicate)	R - Na2S2O3	
AX24217	10/14/17	1301	G	Water	X	X	1	FB-2 (Field Blank)	S - H2SO4	
AX24218	10/14/17	0800	G	Water	X	X	1	MW-13	T - TSP Dodecahydrate	

Possible Hazard Identification <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: Keith Kornej	Date/Time: 10/17/2017 12:00
Relinquished by:	Date/Time:
Relinquished by:	Date/Time:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:

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:	
Received by:	Date/Time: 10-18-17 1035
Received by:	Date/Time:
Received by:	Date/Time:
Cooler Temperature(s) and Other Remarks: 19.4c LR 7 TO	



Chain of Custody Record

Client Information		Sampler: Nick Pitts/Antony Geggins		Lab P#: Whitmire, Chylene R		Carrier Tracking No(s):	
Client Contact: Keith Komegay		Phone:		E-Mail: chylene.whitmire@testamericainc.com		COC No: 400-56525-24537.1	
Company: Alabama Power General Test Laboratory		Due Date Requested: 11/8/2017		Analysis Requested		Page: Page 1 of 1	
Address: 744 County Rd 87 GSC #8		TAT Requested (days):		Perform MS/MSD (Yes or No)		Job #: 815_Ra226, 930_Ra228, Ra226Ra228_GFPc	
City: Calera		PO #:		Field Filtered Sample (Yes or No)		Total Number of Containers	
State, Zip: AL, 35040		WO #:		Matrix (Water, Solid, Overstabil, or Other, Specify)		Preservation Codes:	
Phone: 205-664-6004		Project #:		Sample Type (C=comp, G=grab)		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 M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Email: fkkomej@southernco.com		SSOW#:		Sample Date		Special Instructions/Note:	
Project Name: CCR		Site: Gorgas Landfill		Sample Time			
Sample Identification		Sample Date		Sample Time		Preservation Code	
AX24219	10/14/17	0900	G	Water	X	1	MM-14
AX24220	10/14/17	0950	G	Water	X	1	MM-15
AX24221	10/14/17	0835	G	Water	X	1	FB-1 (Field Blank)
AX24222	10/14/17	1057	G	Water	X	1	MM-16
AX24223	10/14/17	1057	G	Water	X	1	MM-16 Dup (Sample Duplicate)
AX24224	10/14/17	1202	G	Water	X	1	MM-19
AX24225	10/14/17	1300	G	Water	X	1	MM-20
AX24226	10/14/17	1325	G	Water	X	1	EB-1 (Equipment Blank)
Possible Hazard Identification <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: <input type="checkbox"/> I, <input type="checkbox"/> II, <input type="checkbox"/> III, <input type="checkbox"/> IV, Other (specify)							
Empty Kit Relinquished by: Date:							
Relinquished by: Keith Komegay		Date: 10/17/2017 12:00		Company: APC		Date/Time: 10-18-17 1035	
Relinquished by:		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) °C and Other Remarks: 19.4 C TR7 TO		Archive For: Months	



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-3
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

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	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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 <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: 400-144723-3
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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

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
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	11-30-17 *
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	12-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	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: 400-144723-3
SDG: Plant Gorgas CCB Landfills

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	02-21-18
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



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

- Field Complete
- Lab Complete

Lab ETA 10/16/2017 13:00

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 (1L): Radiological		
Comments	No temperature preservation requirement.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/14/2017	08:00	1	Groundwater		AX24218
MW-14	10/14/2017	09:00	1	Groundwater		AX24219
MW-15	10/14/2017	09:50	1	Groundwater		AX24220
FB-1	10/14/2017	09:35	1	Field Blank		AX24221
MW-16	10/14/2017	10:57	1	Groundwater		AX24222
MW-16 Dup	10/14/2017	10:57	1	Sample Duplicate		AX24223
MW-19	10/14/2017	12:02	1	Groundwater		AX24224
MW-20	10/14/2017	13:00	1	Groundwater		AX24225
EB-1	10/14/2017	13:25	1	Equipment Blank		AX24226

Relinquished By	Received By	Date/Time
		10/16/2017 14:00
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkorneg@southemco.com, c=US Date: 2017.10.16 18:26:31 -0500</small>	10/16/2017 18:26

SmarTroll ID	4696-23443-3-2		
Turbidity ID	4677-23342-4-1	All metals and radiological bottles have pH < 2	<input checked="" type="checkbox"/>
		Cooler Temp	NA
		Thermometer ID	NA
		pH Strip ID	6153-32041-10-8



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




Field Complete
 Lab Complete

Lab ETA 10/16/2017 14:00

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 (1L): Radiological
Comments	Radium Duplicate collected at MW-7. No temperature preservation requirement.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	10/14/2017	08:18	1	Groundwater		AX24211
MW-6	10/14/2017	09:22	1	Groundwater		AX24212
MW-7	10/14/2017	10:35	3	Groundwater		AX24213
MW-8	10/14/2017	11:29	1	Groundwater		AX24214
MW-18	10/14/2017	12:44	1	Groundwater		AX24215
MW-6DUP	10/14/2017	09:22	1	Sample Duplicate		AX24216
FB-2	10/14/2017	13:01	1	Field Blank		AX24217

Relinquished By	Received By	Date/Time
		10/16/2017 11:15
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornega@southemco.com, c=US Date: 2017.10.16 18:23:21 -0500</small>	10/16/2017 18:23

SmarTroll ID	5141-26150-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20009-2-1	Cooler Temp
		Thermometer ID
		pH Strip ID
		NA
		NA
		6153-32041-10-8

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

 Alabama Power



Sample Group : WMWGORLF_1121

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1121

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 samples were outsourced to Test America, Pensacola for analysis. Below is the case narrative provided by Test America.

Job Narrative
400-144723-6
General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 374155 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits. RPD Limit is 4, RPD value is 17.

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX24262 MW-8 (400-144723-84). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24259 MW-5 (400-144723-81), AX24260 MW-6 (400-144723-82), AX24260 MW-6 (400-144723-82[MS]), AX24260 MW-6 (400-144723-82[MSD]), AX24261 MW-7 (400-144723-83), AX24262 MW-8 (400-144723-84), AX24263 MW-18 (400-144723-85), AX24264 MW-7 DUP (400-144723-86), AX24266 MW-13 (400-144723-88), AX24267 MW-14 (400-144723-89), AX24268 MW-14 DUP (400-144723-90), AX24269 MW-15 (400-144723-91), AX24270 MW-16 (400-144723-92), AX24271 MW-19 (400-144723-93), AX24273 MW-20 (400-144723-95), AX24273 MW-20 (400-144723-95[MS]), AX24273 MW-20 (400-144723-95[MSD]), (400-144723-A-53 MS) and (400-144723-A-53 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373750 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.



Metals ICP

Gorgas Landfill

WMWGORLF_1121

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>
AX24259	20171018BK	WMWGORLF_1121
AX24260	20171018BK	WMWGORLF_1121
AX24261	20171018BK	WMWGORLF_1121
AX24262	20171018BK	WMWGORLF_1121
AX24263	20171018BK	WMWGORLF_1121
AX24264	20171018BK	WMWGORLF_1121
AX24265	20171018BK	WMWGORLF_1121
AX24266	20171018BK	WMWGORLF_1121
AX24267	20171018BK	WMWGORLF_1121
AX24268	20171018BK	WMWGORLF_1121
AX24269	20171019K & 20171025K	WMWGORLF_1121
AX24270	20171019K & 20171025K	WMWGORLF_1121
AX24271	20171019K & 20171025K	WMWGORLF_1121
AX24272	20171019K	WMWGORLF_1121
AX24273	20171019K & 20171025K	WMWGORLF_1121
AX24274	20171019K	WMWGORLF_1121

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:

- 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 with the following exception: the Calcium dilutions run on ICP CI#3392-17206-1-1 on 10/18/2017 had a failing final CCB due lack of internal standard introduction. Calcium dilutions were re-analyzed on 10/25/2017 on ICP CI#3619-18076-1-1 with passing CCB results.



- 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.
- An additional Rinse was added between samples for monitoring Lithium due to possible matrix issues.
- 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 dilution to compensate for any matrix effects. The following samples were further 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>
AX24259	Calcium	x100
AX24260	Calcium	x100
AX24261	Calcium	x10
AX24262	Calcium	x10
AX24263	Calcium	x10
AX24264	Calcium	x10
AX24266	Calcium	x10
AX24267	Calcium	x10

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



AX24268	Calcium	x10
AX24268MS	Calcium	x10
AX24268MSD	Calcium	x10
AX24269	Calcium	x10
AX24270	Calcium	x10
AX24271	Calcium	x100
AX24273	Calcium	x10

8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1121

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>
AX24259	604662	WMWGORLF_1121
AX24260	604662	WMWGORLF_1121
AX24261	604662	WMWGORLF_1121
AX24262	604662	WMWGORLF_1121
AX24263	604662	WMWGORLF_1121
AX24264	604662	WMWGORLF_1121
AX24265	604662	WMWGORLF_1121
AX24266	604662	WMWGORLF_1121
AX24267	604662	WMWGORLF_1121
AX24268	604662	WMWGORLF_1121
AX24269	604663	WMWGORLF_1121
AX24270	604663	WMWGORLF_1121
AX24271	604663	WMWGORLF_1121
AX24272	604663	WMWGORLF_1121
AX24273	604663	WMWGORLF_1121
AX24274	604663	WMWGORLF_1121

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_1121

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>
AX24259	604859	WMWGORLF_1121
AX24260	604859	WMWGORLF_1121
AX24261	604859	WMWGORLF_1121
AX24262	604859	WMWGORLF_1121
AX24263	604859	WMWGORLF_1121
AX24264	604859	WMWGORLF_1121
AX24265	604859	WMWGORLF_1121
AX24266	604859	WMWGORLF_1121
AX24267	604859	WMWGORLF_1121
AX24268	604859	WMWGORLF_1121
AX24269	604860	WMWGORLF_1121
AX24270	604860	WMWGORLF_1121
AX24271	604860	WMWGORLF_1121
AX24272	604860	WMWGORLF_1121
AX24273	604860	WMWGORLF_1121
AX24274	604860	WMWGORLF_1121

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_1121

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>
AX24259	604759	WMWGORLF_1121
AX24260	604759	WMWGORLF_1121
AX24261	604759	WMWGORLF_1121
AX24262	604759	WMWGORLF_1121
AX24263	604873	WMWGORLF_1121
AX24264	604873	WMWGORLF_1121
AX24265	605052	WMWGORLF_1121
AX24266	604873	WMWGORLF_1121
AX24267	604873	WMWGORLF_1121
AX24268	604873	WMWGORLF_1121
AX24269	604873	WMWGORLF_1121
AX24270	604873	WMWGORLF_1121
AX24271	604873	WMWGORLF_1121
AX24272	604874	WMWGORLF_1121
AX24273	604874	WMWGORLF_1121
AX24274	604874	WMWGORLF_1121

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 0.5 mg 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 2.5 mg and 200 mg residue except for AX24265, AX24272 and AX24274 which did not meet the 2.5mg residue requirement.

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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24259

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	0.0103	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7		2	0.02	0.1	J 0.0319	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		100	10	50	332	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	J 0.00203	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7		2	0.010	0.05	0.0968	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	J 0.00254	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C		1		250	3890	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E		1	0.60	2.00	7.2	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C		1	0.032	0.10	0.37	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E		75	110	380	2300	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24259

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23	122	70 to 130	0.752	20	
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15	97.4	70 to 130	0.617	20	
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046	94.6	70 to 130	1.70	20	
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115	97.3	70 to 130	1.96	20	
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115	94.9	70 to 130	1.70	20	
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115	102	70 to 130	1.19	20	
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115	103	70 to 130	4.48	20	
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115	99.5	70 to 130	1.61	20	
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115	102	70 to 130	0.821	20	
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115	98.0	70 to 130	2.05	20	
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75	120	70 to 130	0.00	20	
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115	109	70 to 130	1.48	20	
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115	96.5	70 to 130	5.73	20	
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115	102	70 to 130	3.36	20	
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115	98.8	70 to 130	5.32	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24259

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24262	Solids, Dissolved	mg/L	4.00	25				2610	46.0	40 to 60			1.56 5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24260

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00475	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0136	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0852	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	100		10	50	378	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0303	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.259	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	3260	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.9	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	0.14	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	60		84.0	300	1900	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24260

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046		94.6	70 to 130	1.70	20
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23		122	70 to 130	0.752	20
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15		97.4	70 to 130	0.617	20
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115		98.0	70 to 130	2.05	20
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75		120	70 to 130	0.00	20
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115		97.3	70 to 130	1.96	20
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115		94.9	70 to 130	1.70	20
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115		99.5	70 to 130	1.61	20
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115		102	70 to 130	0.821	20
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115		102	70 to 130	1.19	20
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115		103	70 to 130	4.48	20
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115		109	70 to 130	1.48	20
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115		96.5	70 to 130	5.73	20
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130	3.36	20
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115		98.8	70 to 130	5.32	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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24260

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	
				Limit				Duplicate	LFB	Limit	Prec	
AX24262	Solids, Dissolved	mg/L	4.00	25				2610	46.0	40 to 60	1.56	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, 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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24261

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00144	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0132	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0719	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	294	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00371	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.129	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			125	1150	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1		0.60	2.00	34	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	0.20	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	75		110	380	1300	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24261

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046		94.6	70 to 130	1.70	20
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15		97.4	70 to 130	0.617	20
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23		122	70 to 130	0.752	20
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115		98.0	70 to 130	2.05	20
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75		120	70 to 130	0.00	20
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115		102	70 to 130	1.19	20
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115		103	70 to 130	4.48	20
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115		97.3	70 to 130	1.96	20
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115		94.9	70 to 130	1.70	20
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115		99.5	70 to 130	1.61	20
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115		102	70 to 130	0.821	20
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115		109	70 to 130	1.48	20
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115		96.5	70 to 130	5.73	20
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130	3.36	20
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115		98.8	70 to 130	5.32	20

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Laboratory certification ID: E571114

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24261

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24262	Solids, Dissolved	mg/L	4.00	25				2610	46.0	40 to 60			1.56 5

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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



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24262

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00106	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0139	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0702	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	307	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00518	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.191	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/19/2017	SM 2540C	1			250	2530	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	10		6.00	20	130	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	0.22	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	60		84.0	300	1400	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24262

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	
			MB	Limit					Limit	Rec	Limit	Prec		
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046		94.6	70 to 130	1.70	20
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23		122	70 to 130	0.752	20
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115		97.3	70 to 130	1.96	20
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115		94.9	70 to 130	1.70	20
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115		99.5	70 to 130	1.61	20
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115		102	70 to 130	0.821	20
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115		102	70 to 130	1.19	20
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115		103	70 to 130	4.48	20
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15		97.4	70 to 130	0.617	20
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115		98.0	70 to 130	2.05	20
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75		120	70 to 130	0.00	20
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115		109	70 to 130	1.48	20
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115		96.5	70 to 130	5.73	20
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130	3.36	20
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115		98.8	70 to 130	5.32	20

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24262

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24262	Solids, Dissolved	mg/L	4.00	25			2610	46.0	40 to 60	1.56	5

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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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24263

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/18/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01	J	0.00964	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7			2	0.02	0.1	J	0.0325	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7			10	1.0	5.0		327	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7			2	0.010	0.05		0.0592	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01	J	0.00349	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/20/2017	SM 2540C			1		250		3210	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E			1	0.60	2.00	J	1.3	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C			1	0.032	0.10		0.32	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E			60	84.0	300		1800	mg/L

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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: WMWGORLF
 Sample Date: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24263

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit				Limit	Rec	Limit	Prec		
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23	122	70 to 130	0.752	20
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15	97.4	70 to 130	0.617	20
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115	99.5	70 to 130	1.61	20
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115	102	70 to 130	0.821	20
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046	94.6	70 to 130	1.70	20
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115	102	70 to 130	1.19	20
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115	103	70 to 130	4.48	20
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115	109	70 to 130	1.48	20
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115	96.5	70 to 130	5.73	20
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115	102	70 to 130	3.36	20
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115	98.8	70 to 130	5.32	20
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115	98.0	70 to 130	2.05	20
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75	120	70 to 130	0.00	20
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115	97.3	70 to 130	1.96	20
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115	94.9	70 to 130	1.70	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24263

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24271	Solids, Dissolved	mg/L	1.00	25				3770	45.0	40 to 60			0.396 5

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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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-7DUP

Laboratory ID Number: AX24264

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00141	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0162	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0720	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	279	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00382	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	0.128	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/20/2017	SM 2540C	1			125	2450	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1		0.60	2.00	34	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	0.20	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	75		110	380	1300	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-7DUP

Laboratory ID Number: AX24264

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit
			MB	Limit					Limit	Rec	Limit	Prec	
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15	97.4	70 to 130	0.617	20
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046	94.6	70 to 130	1.70	20
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23	122	70 to 130	0.752	20
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115	109	70 to 130	1.48	20
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115	96.5	70 to 130	5.73	20
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115	102	70 to 130	3.36	20
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115	98.8	70 to 130	5.32	20
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115	98.0	70 to 130	2.05	20
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75	120	70 to 130	0.00	20
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115	99.5	70 to 130	1.61	20
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115	102	70 to 130	0.821	20
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115	97.3	70 to 130	1.96	20
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115	94.9	70 to 130	1.70	20
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115	102	70 to 130	1.19	20
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115	103	70 to 130	4.48	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-7DUP

Laboratory ID Number: AX24264

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX24271	Solids, Dissolved	mg/L	1.00	25			3770	45.0	40 to 60			0.396	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, 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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24265

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24265

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046		94.6	70 to 130	1.70	20
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15		97.4	70 to 130	0.617	20
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23		122	70 to 130	0.752	20
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115		98.0	70 to 130	2.05	20
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75		120	70 to 130	0.00	20
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115		99.5	70 to 130	1.61	20
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115		102	70 to 130	0.821	20
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115		102	70 to 130	1.19	20
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115		103	70 to 130	4.48	20
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115		109	70 to 130	1.48	20
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115		96.5	70 to 130	5.73	20
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130	3.36	20
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115		98.8	70 to 130	5.32	20
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115		97.3	70 to 130	1.96	20
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115		94.9	70 to 130	1.70	20

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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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24265

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24492	Solids, Dissolved	mg/L	2.00	25			2300	53.0	40 to 60	1.81	5

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CC:

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

Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24266

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0128	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0567	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	300	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0193	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	J 0.0204	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/20/2017	SM 2540C	1			250	3210	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.6	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	0.22	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	60		84.0	300	1800	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24266

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15	97.4	70 to 130	0.617	20
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046	94.6	70 to 130	1.70	20
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23	122	70 to 130	0.752	20
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115	99.5	70 to 130	1.61	20
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115	102	70 to 130	0.821	20
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115	98.0	70 to 130	2.05	20
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75	120	70 to 130	0.00	20
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115	97.3	70 to 130	1.96	20
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115	94.9	70 to 130	1.70	20
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115	109	70 to 130	1.48	20
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115	96.5	70 to 130	5.73	20
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115	102	70 to 130	3.36	20
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115	98.8	70 to 130	5.32	20
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115	102	70 to 130	1.19	20
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115	103	70 to 130	4.48	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24266

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX24271	Solids, Dissolved	mg/L	1.00	25			3770	45.0	40 to 60			0.396	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24267

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00145	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0125	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2		0.02	0.1	J 0.0460	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	325	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0108	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2		0.010	0.05	J 0.0351	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/20/2017	SM 2540C	1			250	3190	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.4	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	0.26	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	60		84.0	300	1800	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24267

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit	
			MB	Limit					Limit	Rec	Limit	Prec		
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23		122	70 to 130 0.752		20
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15		97.4	70 to 130 0.617		20
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046		94.6	70 to 130 1.70		20
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115		98.0	70 to 130 2.05		20
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75		120	70 to 130 0.00		20
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115		99.5	70 to 130 1.61		20
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115		102	70 to 130 0.821		20
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115		97.3	70 to 130 1.96		20
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115		94.9	70 to 130 1.70		20
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115		109	70 to 130 1.48		20
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115		96.5	70 to 130 5.73		20
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130 3.36		20
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115		98.8	70 to 130 5.32		20
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115		102	70 to 130 1.19		20
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115		103	70 to 130 4.48		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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24267

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24271	Solids, Dissolved	mg/L	1.00	25			3770	45.0	40 to 60		0.396 5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AX24268

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5			0.0010	0.005	J	0.00147	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01		0.0116	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/18/2017	EPA 200.7	2			0.02	0.1	J	0.0458	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10			1.0	5.0		321	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01		0.0105	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/18/2017	EPA 200.7	2			0.010	0.05	J	0.0350	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/20/2017	SM 2540C	1				250		3160	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1			0.60	2.00	J	1.4	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1			0.032	0.10		0.26	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	60			84.0	300		1700	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AX24268

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24268	Mercury, Total by CVAA	mg/L	0.0000517	0.0005	0.004	0.00379	0.00385	0.00381	0.0034 to 0.0046		94.6	70 to 130	1.70	20
AX24268	Lithium, Total	mg/L	-0.000164	0.022	0.20	0.279	0.277	0.195	0.17 to 0.23		122	70 to 130	0.752	20
AX24268	Boron, Total	mg/L	0.000339	0.044	1.00	1.02	1.01	0.949	0.85 to 1.15		97.4	70 to 130	0.617	20
AX24268	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.0995	0.101	0.106	0.085 to 0.115		99.5	70 to 130	1.61	20
AX24268	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.102	0.103	0.103	0.085 to 0.115		102	70 to 130	0.821	20
AX24268	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.120	0.122	0.110	0.085 to 0.115		109	70 to 130	1.48	20
AX24268	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0965	0.102	0.102	0.085 to 0.115		96.5	70 to 130	5.73	20
AX24268	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130	3.36	20
AX24268	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0988	0.104	0.0995	0.085 to 0.115		98.8	70 to 130	5.32	20
AX24268	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.110	0.112	0.0997	0.085 to 0.115		98.0	70 to 130	2.05	20
AX24268	Calcium, Total	mg/L	-0.00515	0.22	5.00	327	327	4.58	4.25 to 5.75		120	70 to 130	0.00	20
AX24268	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0973	0.0993	0.1000	0.085 to 0.115		97.3	70 to 130	1.96	20
AX24268	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0949	0.0966	0.0954	0.085 to 0.115		94.9	70 to 130	1.70	20
AX24268	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.104	0.105	0.103	0.085 to 0.115		102	70 to 130	1.19	20
AX24268	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.103	0.107	0.105	0.085 to 0.115		103	70 to 130	4.48	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AX24268

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24271	Solids, Dissolved	mg/L	1.00	25			3770	45.0	40 to 60	0.396	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24269

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/18/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01		0.0112	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7			2	0.02	0.1	J	0.0592	mg/L
* Calcium, Total	HRG	10/25/2017	EPA 200.7			10	1.0	5.0		275	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01		0.0696	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7			2	0.010	0.05		0.0634	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	KRC	10/20/2017	SM 2540C			1		250		2640	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E			1	0.60	2.00	J	0.93	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C			1	0.032	0.10		0.35	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E			60	84.0	300		1500	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

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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: WMWGORLF
 Sample Date: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24269

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24274	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0947	0.0939	0.1000	0.085 to 0.115		94.7	70 to 130	0.796	20
AX24274	Mercury, Total by CVAA	mg/L	0.0000523	0.0005	0.004	0.00373	0.00383	0.00378	0.0034 to 0.0046		93.2	70 to 130	2.69	20
AX24274	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.105	0.106	0.110	0.085 to 0.115		105	70 to 130	0.830	20
AX24274	Boron, Total	mg/L	-0.000311	0.044	1.00	0.982	0.965	0.996	0.85 to 1.15		98.2	70 to 130	1.68	20
AX24274	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.0981	0.0977	0.103	0.085 to 0.115		98.1	70 to 130	0.403	20
AX24274	Lithium, Total	mg/L	0.0000434	0.022	0.20	0.194	0.183	0.199	0.17 to 0.23		96.9	70 to 130	5.64	20
AX24274	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.0957	0.0928	0.0997	0.085 to 0.115		95.7	70 to 130	3.08	20
AX24274	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0951	0.0992	0.0995	0.085 to 0.115		95.1	70 to 130	4.24	20
AX24274	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.0960	0.0961	0.103	0.085 to 0.115		96.0	70 to 130	0.0778	20
AX24274	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.102	0.104	0.105	0.085 to 0.115		102	70 to 130	2.34	20
AX24274	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0888	0.0882	0.0954	0.085 to 0.115		88.8	70 to 130	0.765	20
AX24274	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.100	0.100	0.106	0.085 to 0.115		100	70 to 130	0.0302	20
AX24274	Calcium, Total	mg/L	-0.00972	0.22	5.00	5.08	4.91	5.08	4.25 to 5.75		102	70 to 130	3.35	20
AX24274	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0944	0.0977	0.102	0.085 to 0.115		94.4	70 to 130	3.35	20
AX24274	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.101	0.101	0.107	0.085 to 0.115		101	70 to 130	0.0453	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24269

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24271	Solids, Dissolved	mg/L	1.00	25				3770	45.0	40 to 60			0.396 5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24270

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	J 0.00323	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0133	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	J 0.0456	mg/L
* Calcium, Total	HRG	10/25/2017	EPA 200.7	10		1.0	5.0	307	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	J 0.00979	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	J 0.0165	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/20/2017	SM 2540C	1			125	2440	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1		0.60	2.00	3.6	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	0.18	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	60		84.0	300	1200	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24270

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24274	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0947	0.0939	0.1000	0.085 to 0.115		94.7	70 to 130	0.796	20
AX24274	Mercury, Total by CVAA	mg/L	0.0000523	0.0005	0.004	0.00373	0.00383	0.00378	0.0034 to 0.0046		93.2	70 to 130	2.69	20
AX24274	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.105	0.106	0.110	0.085 to 0.115		105	70 to 130	0.830	20
AX24274	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.0960	0.0961	0.103	0.085 to 0.115		96.0	70 to 130	0.0778	20
AX24274	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.102	0.104	0.105	0.085 to 0.115		102	70 to 130	2.34	20
AX24274	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0888	0.0882	0.0954	0.085 to 0.115		88.8	70 to 130	0.765	20
AX24274	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.0957	0.0928	0.0997	0.085 to 0.115		95.7	70 to 130	3.08	20
AX24274	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0951	0.0992	0.0995	0.085 to 0.115		95.1	70 to 130	4.24	20
AX24274	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.100	0.100	0.106	0.085 to 0.115		100	70 to 130	0.0302	20
AX24274	Calcium, Total	mg/L	-0.00972	0.22	5.00	5.08	4.91	5.08	4.25 to 5.75		102	70 to 130	3.35	20
AX24274	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0944	0.0977	0.102	0.085 to 0.115		94.4	70 to 130	3.35	20
AX24274	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.101	0.101	0.107	0.085 to 0.115		101	70 to 130	0.0453	20
AX24274	Boron, Total	mg/L	-0.000311	0.044	1.00	0.982	0.965	0.996	0.85 to 1.15		98.2	70 to 130	1.68	20
AX24274	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.0981	0.0977	0.103	0.085 to 0.115		98.1	70 to 130	0.403	20
AX24274	Lithium, Total	mg/L	0.0000434	0.022	0.20	0.194	0.183	0.199	0.17 to 0.23		96.9	70 to 130	5.64	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24270

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX24271	Solids, Dissolved	mg/L	1.00	25			3770	45.0	40 to 60	0.396	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, 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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24271

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	0.0105	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7		2	0.02	0.1	J 0.0354	mg/L
* Calcium, Total	HRG	10/25/2017	EPA 200.7		100	10	50	375	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	0.166	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7		2	0.010	0.05	0.0840	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/20/2017	SM 2540C		1		250	3800	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E		1	0.60	2.00	2.0	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C		1	0.032	0.10	0.34	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E		75	110	380	2200	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24271

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24274	Mercury, Total by CVAA	mg/L	0.0000523	0.0005	0.004	0.00373	0.00383	0.00378	0.0034 to 0.0046		93.2	70 to 130	2.69	20
AX24274	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.105	0.106	0.110	0.085 to 0.115		105	70 to 130	0.830	20
AX24274	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0947	0.0939	0.1000	0.085 to 0.115		94.7	70 to 130	0.796	20
AX24274	Boron, Total	mg/L	-0.000311	0.044	1.00	0.982	0.965	0.996	0.85 to 1.15		98.2	70 to 130	1.68	20
AX24274	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.0981	0.0977	0.103	0.085 to 0.115		98.1	70 to 130	0.403	20
AX24274	Lithium, Total	mg/L	0.0000434	0.022	0.20	0.194	0.183	0.199	0.17 to 0.23		96.9	70 to 130	5.64	20
AX24274	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.0960	0.0961	0.103	0.085 to 0.115		96.0	70 to 130	0.0778	20
AX24274	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.102	0.104	0.105	0.085 to 0.115		102	70 to 130	2.34	20
AX24274	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0888	0.0882	0.0954	0.085 to 0.115		88.8	70 to 130	0.765	20
AX24274	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.0957	0.0928	0.0997	0.085 to 0.115		95.7	70 to 130	3.08	20
AX24274	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0951	0.0992	0.0995	0.085 to 0.115		95.1	70 to 130	4.24	20
AX24274	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.100	0.100	0.106	0.085 to 0.115		100	70 to 130	0.0302	20
AX24274	Calcium, Total	mg/L	-0.00972	0.22	5.00	5.08	4.91	5.08	4.25 to 5.75		102	70 to 130	3.35	20
AX24274	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0944	0.0977	0.102	0.085 to 0.115		94.4	70 to 130	3.35	20
AX24274	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.101	0.101	0.107	0.085 to 0.115		101	70 to 130	0.0453	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24271

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
								Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX24271	Solids, Dissolved	mg/L	1.00	25				3770	45.0	40 to 60			0.396	5

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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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24272

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/19/2017	EPA 200.7		2	0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7		2	0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/20/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E		1	0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E		1	1.40	5.00	U <1.4	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24272

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24274	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0947	0.0939	0.1000	0.085 to 0.115	94.7	70 to 130	0.796	20
AX24274	Mercury, Total by CVAA	mg/L	0.0000523	0.0005	0.004	0.00373	0.00383	0.00378	0.0034 to 0.0046	93.2	70 to 130	2.69	20
AX24274	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.105	0.106	0.110	0.085 to 0.115	105	70 to 130	0.830	20
AX24274	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.0957	0.0928	0.0997	0.085 to 0.115	95.7	70 to 130	3.08	20
AX24274	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0951	0.0992	0.0995	0.085 to 0.115	95.1	70 to 130	4.24	20
AX24274	Boron, Total	mg/L	-0.000311	0.044	1.00	0.982	0.965	0.996	0.85 to 1.15	98.2	70 to 130	1.68	20
AX24274	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.0981	0.0977	0.103	0.085 to 0.115	98.1	70 to 130	0.403	20
AX24274	Lithium, Total	mg/L	0.0000434	0.022	0.20	0.194	0.183	0.199	0.17 to 0.23	96.9	70 to 130	5.64	20
AX24274	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.100	0.100	0.106	0.085 to 0.115	100	70 to 130	0.0302	20
AX24274	Calcium, Total	mg/L	-0.00972	0.22	5.00	5.08	4.91	5.08	4.25 to 5.75	102	70 to 130	3.35	20
AX24274	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0944	0.0977	0.102	0.085 to 0.115	94.4	70 to 130	3.35	20
AX24274	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.101	0.101	0.107	0.085 to 0.115	101	70 to 130	0.0453	20
AX24274	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.0960	0.0961	0.103	0.085 to 0.115	96.0	70 to 130	0.0778	20
AX24274	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.102	0.104	0.105	0.085 to 0.115	102	70 to 130	2.34	20
AX24274	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0888	0.0882	0.0954	0.085 to 0.115	88.8	70 to 130	0.765	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24272

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24273	Solids, Dissolved	mg/L	1.00	25			2560	45.0	40 to 60	2.66	5

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24273

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	0.0156	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	0.107	mg/L
* Calcium, Total	HRG	10/25/2017	EPA 200.7	10		1.0	5.0	353	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	0.262	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/20/2017	SM 2540C	1			250	2700	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1		0.60	2.00	4.8	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	0.14	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	60		84.0	300	1500	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: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24273

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24274	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0947	0.0939	0.1000	0.085 to 0.115		94.7	70 to 130	0.796	20
AX24274	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.105	0.106	0.110	0.085 to 0.115		105	70 to 130	0.830	20
AX24274	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.0957	0.0928	0.0997	0.085 to 0.115		95.7	70 to 130	3.08	20
AX24274	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0951	0.0992	0.0995	0.085 to 0.115		95.1	70 to 130	4.24	20
AX24274	Boron, Total	mg/L	-0.000311	0.044	1.00	0.982	0.965	0.996	0.85 to 1.15		98.2	70 to 130	1.68	20
AX24274	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.0981	0.0977	0.103	0.085 to 0.115		98.1	70 to 130	0.403	20
AX24274	Lithium, Total	mg/L	0.0000434	0.022	0.20	0.194	0.183	0.199	0.17 to 0.23		96.9	70 to 130	5.64	20
AX24274	Mercury, Total by CVAA	mg/L	0.0000523	0.0005	0.004	0.00373	0.00383	0.00378	0.0034 to 0.0046		93.2	70 to 130	2.69	20
AX24274	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.0960	0.0961	0.103	0.085 to 0.115		96.0	70 to 130	0.0778	20
AX24274	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.102	0.104	0.105	0.085 to 0.115		102	70 to 130	2.34	20
AX24274	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0888	0.0882	0.0954	0.085 to 0.115		88.8	70 to 130	0.765	20
AX24274	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.100	0.100	0.106	0.085 to 0.115		100	70 to 130	0.0302	20
AX24274	Calcium, Total	mg/L	-0.00972	0.22	5.00	5.08	4.91	5.08	4.25 to 5.75		102	70 to 130	3.35	20
AX24274	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0944	0.0977	0.102	0.085 to 0.115		94.4	70 to 130	3.35	20
AX24274	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.101	0.101	0.107	0.085 to 0.115		101	70 to 130	0.0453	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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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24273

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit				Duplicate	LFB	Limit	Prec	
AX24273	Solids, Dissolved	mg/L	1.00	25			2560	45.0	40 to 60	2.66	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, 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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24274

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/19/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/18/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/19/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/18/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/18/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/18/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	KRC	10/20/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/6/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/6/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/6/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	mg/L

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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-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24274

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24274	Mercury, Total by CVAA	mg/L	0.0000523	0.0005	0.004	0.00373	0.00383	0.00378	0.0034 to 0.0046		93.2	70 to 130	2.69	20
AX24274	Cobalt, Total	mg/L	0.00000248	0.0044	0.10	0.105	0.106	0.110	0.085 to 0.115		105	70 to 130	0.830	20
AX24274	Boron, Total	mg/L	-0.000311	0.044	1.00	0.982	0.965	0.996	0.85 to 1.15		98.2	70 to 130	1.68	20
AX24274	Chromium, Total	mg/L	0.0000220	0.0044	0.10	0.0981	0.0977	0.103	0.085 to 0.115		98.1	70 to 130	0.403	20
AX24274	Lithium, Total	mg/L	0.0000434	0.022	0.20	0.194	0.183	0.199	0.17 to 0.23		96.9	70 to 130	5.64	20
AX24274	Antimony, Total	mg/L	0.0000537	0.00132	0.10	0.0947	0.0939	0.1000	0.085 to 0.115		94.7	70 to 130	0.796	20
AX24274	Barium, Total	mg/L	0.00000239	0.0044	0.10	0.0957	0.0928	0.0997	0.085 to 0.115		95.7	70 to 130	3.08	20
AX24274	Thallium, Total	mg/L	0.00000496	0.00044	0.10	0.0951	0.0992	0.0995	0.085 to 0.115		95.1	70 to 130	4.24	20
AX24274	Arsenic, Total	mg/L	0.00000897	0.0022	0.10	0.0960	0.0961	0.103	0.085 to 0.115		96.0	70 to 130	0.0778	20
AX24274	Beryllium, Total	mg/L	0.0000107	0.00132	0.10	0.102	0.104	0.105	0.085 to 0.115		102	70 to 130	2.34	20
AX24274	Molybdenum, Total	mg/L	0.00000661	0.0044	0.10	0.0888	0.0882	0.0954	0.085 to 0.115		88.8	70 to 130	0.765	20
AX24274	Cadmium, Total	mg/L	0.00000109	0.00066	0.10	0.100	0.100	0.106	0.085 to 0.115		100	70 to 130	0.0302	20
AX24274	Calcium, Total	mg/L	-0.00972	0.22	5.00	5.08	4.91	5.08	4.25 to 5.75		102	70 to 130	3.35	20
AX24274	Lead, Total	mg/L	0.00000487	0.0022	0.10	0.0944	0.0977	0.102	0.085 to 0.115		94.4	70 to 130	3.35	20
AX24274	Selenium, Total	mg/L	0.000187	0.0044	0.10	0.101	0.101	0.107	0.085 to 0.115		101	70 to 130	0.0453	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: WMWGORLFEB
 Sample Date: 15-Oct-17
 Customer ID:
 Delivery Date: 16-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24274

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX24273	Solids, Dissolved	mg/L	1.00	25			2560	45.0	40 to 60			2.66	5

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 10/16/2017 14:00

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): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions"/>		
Comments	<input type="text" value="All anions outsourced to Test America Pensacola"/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/15/2017	08:52	4	Groundwater		AX24266
MW-14	10/15/2017	09:43	4	Groundwater		AX24267
MW-14 Dup	10/15/2017	09:43	4	Sample Duplicate		AX24268
MW-15	10/15/2017	10:47	4	Groundwater		AX24269
MW-16	10/15/2017	11:47	4	Groundwater		AX24270
MW-19	10/15/2017	12:45	4	Groundwater		AX24271
FB-1	10/15/2017	12:30	4	Field Blank		AX24272
MW-20	10/15/2017	13:41	4	Groundwater		AX24273
EB-1	10/15/2017	14:05	4	Equipment Blank		AX24274

Relinquished By	Received By	Date/Time
		10/16/2017 14:00
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkorneg@southernco.com, c=US Date: 2017.10.16 18:36:58 -0500</small>	10/16/2017 18:37

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="4677-23342-4-1"/>		
Cooler Temp		<input type="text" value="1.5 degrees C"/>
Thermometer ID		<input type="text" value="6035-30997-2-2"/>
pH Strip ID	<input type="text" value="6153-32040-10-7"/>	



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

- Field Complete
- Lab Complete

Lab ETA 10/16/2017 15:00

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 (500mL): TDS, Bottle 4 (250mL): Anions
Comments	All anions outsourced to Test America, Pensacola

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	10/15/2017	10:07	4	Groundwater		AX24259
MW-6	10/15/2017	11:09	4	Groundwater		AX24260
MW-7	10/15/2017	12:27	4	Groundwater		AX24261
MW-8	10/15/2017	13:18	4	Groundwater		AX24262
MW-18	10/15/2017	14:33	4	Groundwater		AX24263
MW-7DUP	10/15/2017	12:27	4	Sample Duplicate		AX24264
FB-2	10/15/2017	13:02	4	Field Blank		AX24265

Relinquished By	Received By	Date/Time
 	 Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkorneg@southemco.com, c=US Date: 2017.10.16 18:29:24 -0500</small>	10/16/2017 11:15 10/16/2017 18:29

SmarTroll ID	5141-26150-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20009-2-1	Cooler Temp
		1.5 degrees C
		Thermometer ID
		6035-30997-2-2
		pH Strip ID
		6153-32040-10-7

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: 400-144723-6

TestAmerica SDG: Plant Gorgas CCB Landfills

Client Project/Site: CCR Plant Gorgas

For:

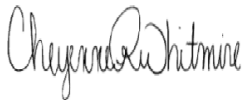
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

11/3/2017 9:44:03 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-6

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-6

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 374155 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits. RPD Limit is 4, RPD value is 17.

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX24262 MW-8 (400-144723-84). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX24259 MW-5 (400-144723-81), AX24260 MW-6 (400-144723-82), AX24260 MW-6 (400-144723-82[MS]), AX24260 MW-6 (400-144723-82[MSD]), AX24261 MW-7 (400-144723-83), AX24262 MW-8 (400-144723-84), AX24263 MW-18 (400-144723-85), AX24264 MW-7 DUP (400-144723-86), AX24266 MW-13 (400-144723-88), AX24267 MW-14 (400-144723-89), AX24268 MW-14 DUP (400-144723-90), AX24269 MW-15 (400-144723-91), AX24270 MW-16 (400-144723-92), AX24271 MW-19 (400-144723-93), AX24273 MW-20 (400-144723-95), AX24273 MW-20 (400-144723-95[MS]), AX24273 MW-20 (400-144723-95[MSD]), (400-144723-A-53 MS) and (400-144723-A-53 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373750 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: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24259 MW-5

Lab Sample ID: 400-144723-81

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.37		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300	^	380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24260 MW-6

Lab Sample ID: 400-144723-82

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9	J	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	1900	F1	300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24261 MW-7

Lab Sample ID: 400-144723-83

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		2.0	0.60	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	1300		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24262 MW-8

Lab Sample ID: 400-144723-84

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	130		20	6.0	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24263 MW-18

Lab Sample ID: 400-144723-85

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3	J	2.0	0.60	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	1800		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24264 MW-7 DUP

Lab Sample ID: 400-144723-86

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		2.0	0.60	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	1300		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24265 FB-2

Lab Sample ID: 400-144723-87

No Detections.

Client Sample ID: AX24266 MW-13

Lab Sample ID: 400-144723-88

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	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		300	84	mg/L	60		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: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24267 MW-14

Lab Sample ID: 400-144723-89

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4	J	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	1800		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24268 MW-14 DUP

Lab Sample ID: 400-144723-90

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4	J	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	1700		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24269 MW-15

Lab Sample ID: 400-144723-91

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	0.93	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	1500		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24270 MW-16

Lab Sample ID: 400-144723-92

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		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	1200		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24271 MW-19

Lab Sample ID: 400-144723-93

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	0.34		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2200		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24272 FB-1

Lab Sample ID: 400-144723-94

No Detections.

Client Sample ID: AX24273 MW-20

Lab Sample ID: 400-144723-95

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.8		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	1500	F1	300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24274 EB-1

Lab Sample ID: 400-144723-96

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: 400-144723-6
SDG: Plant Gorgas CCB Landfills

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



Sample Summary

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

TestAmerica Job ID: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-81	AX24259 MW-5	Water	10/15/17 10:07	10/18/17 10:35
400-144723-82	AX24260 MW-6	Water	10/15/17 11:09	10/18/17 10:35
400-144723-83	AX24261 MW-7	Water	10/15/17 12:27	10/18/17 10:35
400-144723-84	AX24262 MW-8	Water	10/15/17 13:18	10/18/17 10:35
400-144723-85	AX24263 MW-18	Water	10/15/17 14:33	10/18/17 10:35
400-144723-86	AX24264 MW-7 DUP	Water	10/15/17 12:27	10/18/17 10:35
400-144723-87	AX24265 FB-2	Water	10/15/17 13:02	10/18/17 10:35
400-144723-88	AX24266 MW-13	Water	10/15/17 08:52	10/18/17 10:35
400-144723-89	AX24267 MW-14	Water	10/15/17 09:43	10/18/17 10:35
400-144723-90	AX24268 MW-14 DUP	Water	10/15/17 09:43	10/18/17 10:35
400-144723-91	AX24269 MW-15	Water	10/15/17 10:47	10/18/17 10:35
400-144723-92	AX24270 MW-16	Water	10/15/17 11:47	10/18/17 10:35
400-144723-93	AX24271 MW-19	Water	10/15/17 12:45	10/18/17 10:35
400-144723-94	AX24272 FB-1	Water	10/15/17 12:30	10/18/17 10:35
400-144723-95	AX24273 MW-20	Water	10/15/17 13:41	10/18/17 10:35
400-144723-96	AX24274 EB-1	Water	10/15/17 14:05	10/18/17 10:35

Client Sample Results

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

TestAmerica Job ID: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24259 MW-5

Lab Sample ID: 400-144723-81

Date Collected: 10/15/17 10:07

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.2		2.0	0.60	mg/L			10/28/17 09:45	1
Fluoride	0.37		0.10	0.032	mg/L			10/31/17 14:23	1
Sulfate	2300	^	380	110	mg/L			10/28/17 13:50	75

Client Sample ID: AX24260 MW-6

Lab Sample ID: 400-144723-82

Date Collected: 10/15/17 11:09

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9	J	2.0	0.60	mg/L			10/28/17 09:45	1
Fluoride	0.14		0.10	0.032	mg/L			10/31/17 15:50	1
Sulfate	1900	F1	300	84	mg/L			10/28/17 13:14	60

Client Sample ID: AX24261 MW-7

Lab Sample ID: 400-144723-83

Date Collected: 10/15/17 12:27

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		2.0	0.60	mg/L			10/28/17 09:52	1
Fluoride	0.20		0.10	0.032	mg/L			10/31/17 14:26	1
Sulfate	1300		380	110	mg/L			10/28/17 13:14	75

Client Sample ID: AX24262 MW-8

Lab Sample ID: 400-144723-84

Date Collected: 10/15/17 13:18

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		20	6.0	mg/L			10/28/17 10:13	10
Fluoride	0.22		0.10	0.032	mg/L			10/31/17 14:29	1
Sulfate	1400		300	84	mg/L			10/28/17 13:14	60

Client Sample ID: AX24263 MW-18

Lab Sample ID: 400-144723-85

Date Collected: 10/15/17 14:33

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3	J	2.0	0.60	mg/L			10/28/17 09:52	1
Fluoride	0.32		0.10	0.032	mg/L			10/31/17 14:31	1
Sulfate	1800		300	84	mg/L			10/28/17 13:18	60

Client Sample Results

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

TestAmerica Job ID: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24264 MW-7 DUP

Lab Sample ID: 400-144723-86

Date Collected: 10/15/17 12:27

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		2.0	0.60	mg/L			10/28/17 09:52	1
Fluoride	0.20		0.10	0.032	mg/L			10/31/17 14:33	1
Sulfate	1300		380	110	mg/L			10/28/17 13:18	75

Client Sample ID: AX24265 FB-2

Lab Sample ID: 400-144723-87

Date Collected: 10/15/17 13:02

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/28/17 09:52	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 14:48	1
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 12:16	1

Client Sample ID: AX24266 MW-13

Lab Sample ID: 400-144723-88

Date Collected: 10/15/17 08:52

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6	J	2.0	0.60	mg/L			10/28/17 09:52	1
Fluoride	0.22		0.10	0.032	mg/L			10/31/17 14:50	1
Sulfate	1800		300	84	mg/L			10/28/17 13:18	60

Client Sample ID: AX24267 MW-14

Lab Sample ID: 400-144723-89

Date Collected: 10/15/17 09:43

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	J	2.0	0.60	mg/L			10/28/17 10:58	1
Fluoride	0.26		0.10	0.032	mg/L			10/31/17 14:52	1
Sulfate	1800		300	84	mg/L			10/28/17 14:10	60

Client Sample ID: AX24268 MW-14 DUP

Lab Sample ID: 400-144723-90

Date Collected: 10/15/17 09:43

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	J	2.0	0.60	mg/L			10/28/17 10:58	1
Fluoride	0.26		0.10	0.032	mg/L			10/31/17 14:54	1
Sulfate	1700		300	84	mg/L			10/28/17 14:10	60

Client Sample ID: AX24269 MW-15

Lab Sample ID: 400-144723-91

Date Collected: 10/15/17 10:47

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.93	J	2.0	0.60	mg/L			10/28/17 10:58	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24269 MW-15

Lab Sample ID: 400-144723-91

Date Collected: 10/15/17 10:47

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.35		0.10	0.032	mg/L			10/31/17 14:56	1
Sulfate	1500		300	84	mg/L			10/28/17 14:10	60

Client Sample ID: AX24270 MW-16

Lab Sample ID: 400-144723-92

Date Collected: 10/15/17 11:47

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		2.0	0.60	mg/L			10/28/17 10:58	1
Fluoride	0.18		0.10	0.032	mg/L			10/31/17 14:59	1
Sulfate	1200		300	84	mg/L			10/28/17 14:10	60

Client Sample ID: AX24271 MW-19

Lab Sample ID: 400-144723-93

Date Collected: 10/15/17 12:45

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			10/28/17 10:58	1
Fluoride	0.34		0.10	0.032	mg/L			10/31/17 15:01	1
Sulfate	2200		380	110	mg/L			10/28/17 14:50	75

Client Sample ID: AX24272 FB-1

Lab Sample ID: 400-144723-94

Date Collected: 10/15/17 12:30

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/28/17 10:58	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 15:32	1
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 14:42	1

Client Sample ID: AX24273 MW-20

Lab Sample ID: 400-144723-95

Date Collected: 10/15/17 13:41

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.8		2.0	0.60	mg/L			10/28/17 10:58	1
Fluoride	0.14		0.10	0.032	mg/L			11/01/17 07:36	1
Sulfate	1500	F1	300	84	mg/L			10/28/17 14:15	60

Client Sample ID: AX24274 EB-1

Lab Sample ID: 400-144723-96

Date Collected: 10/15/17 14:05

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/28/17 10:58	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 15:34	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24274 EB-1

Lab Sample ID: 400-144723-96

Date Collected: 10/15/17 14:05

Matrix: Water

Date Received: 10/18/17 10:35

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 14:42	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Qualifiers

General Chemistry

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

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: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24259 MW-5
Date Collected: 10/15/17 10:07
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-81
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:45	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	373735	10/28/17 13:50	JLB	TAL PEN

Client Sample ID: AX24260 MW-6
Date Collected: 10/15/17 11:09
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-82
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:45	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:50	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:14	JLB	TAL PEN

Client Sample ID: AX24261 MW-7
Date Collected: 10/15/17 12:27
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-83
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:52	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:26	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	373735	10/28/17 13:14	JLB	TAL PEN

Client Sample ID: AX24262 MW-8
Date Collected: 10/15/17 13:18
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-84
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		10	373712	10/28/17 10:13	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:29	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:14	JLB	TAL PEN

Client Sample ID: AX24263 MW-18
Date Collected: 10/15/17 14:33
Date Received: 10/18/17 10:35

Lab Sample ID: 400-144723-85
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:52	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:31	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:18	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24264 MW-7 DUP

Lab Sample ID: 400-144723-86

Date Collected: 10/15/17 12:27

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:52	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:33	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	373735	10/28/17 13:18	JLB	TAL PEN

Client Sample ID: AX24265 FB-2

Lab Sample ID: 400-144723-87

Date Collected: 10/15/17 13:02

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:52	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:48	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373735	10/28/17 12:16	JLB	TAL PEN

Client Sample ID: AX24266 MW-13

Lab Sample ID: 400-144723-88

Date Collected: 10/15/17 08:52

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373712	10/28/17 09:52	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:50	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373735	10/28/17 13:18	JLB	TAL PEN

Client Sample ID: AX24267 MW-14

Lab Sample ID: 400-144723-89

Date Collected: 10/15/17 09:43

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:10	JLB	TAL PEN

Client Sample ID: AX24268 MW-14 DUP

Lab Sample ID: 400-144723-90

Date Collected: 10/15/17 09:43

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:10	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24269 MW-15

Lab Sample ID: 400-144723-91

Date Collected: 10/15/17 10:47

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:56	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:10	JLB	TAL PEN

Client Sample ID: AX24270 MW-16

Lab Sample ID: 400-144723-92

Date Collected: 10/15/17 11:47

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 14:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:10	JLB	TAL PEN

Client Sample ID: AX24271 MW-19

Lab Sample ID: 400-144723-93

Date Collected: 10/15/17 12:45

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374123	10/31/17 15:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	373750	10/28/17 14:50	JLB	TAL PEN

Client Sample ID: AX24272 FB-1

Lab Sample ID: 400-144723-94

Date Collected: 10/15/17 12:30

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:32	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373750	10/28/17 14:42	JLB	TAL PEN

Client Sample ID: AX24273 MW-20

Lab Sample ID: 400-144723-95

Date Collected: 10/15/17 13:41

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 07:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:15	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-144723-6
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24274 EB-1

Lab Sample ID: 400-144723-96

Date Collected: 10/15/17 14:05

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373750	10/28/17 14:42	JLB	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: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

General Chemistry

Analysis Batch: 373712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-81	AX24259 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-144723-82	AX24260 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144723-83	AX24261 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-144723-84	AX24262 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-144723-85	AX24263 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-144723-86	AX24264 MW-7 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144723-87	AX24265 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-144723-88	AX24266 MW-13	Total/NA	Water	SM 4500 Cl- E	
MB 400-373712/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-373712/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-373712/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144723-82 MS	AX24260 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144723-82 MSD	AX24260 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144723-A-53 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-144723-A-53 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 373713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-89	AX24267 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-144723-90	AX24268 MW-14 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144723-91	AX24269 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144723-92	AX24270 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-144723-93	AX24271 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144723-94	AX24272 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-144723-95	AX24273 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144723-96	AX24274 EB-1	Total/NA	Water	SM 4500 Cl- E	
MB 400-373713/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-373713/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-373713/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144723-95 MS	AX24273 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144723-95 MSD	AX24273 MW-20	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 373735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-81	AX24259 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-144723-82	AX24260 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144723-83	AX24261 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-144723-84	AX24262 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-144723-85	AX24263 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-144723-86	AX24264 MW-7 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144723-87	AX24265 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-144723-88	AX24266 MW-13	Total/NA	Water	SM 4500 SO4 E	
MB 400-373735/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-373735/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-373735/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 373750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-89	AX24267 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-144723-90	AX24268 MW-14 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144723-91	AX24269 MW-15	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: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 373750 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-92	AX24270 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-144723-93	AX24271 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-144723-94	AX24272 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-144723-95	AX24273 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144723-96	AX24274 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-373750/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-373750/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-373750/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144723-82 MS	AX24260 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144723-82 MSD	AX24260 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144723-95 MS	AX24273 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144723-95 MSD	AX24273 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144723-A-53 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-144723-A-53 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 374123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-81	AX24259 MW-5	Total/NA	Water	SM 4500 F C	
400-144723-83	AX24261 MW-7	Total/NA	Water	SM 4500 F C	
400-144723-84	AX24262 MW-8	Total/NA	Water	SM 4500 F C	
400-144723-85	AX24263 MW-18	Total/NA	Water	SM 4500 F C	
400-144723-86	AX24264 MW-7 DUP	Total/NA	Water	SM 4500 F C	
400-144723-87	AX24265 FB-2	Total/NA	Water	SM 4500 F C	
400-144723-88	AX24266 MW-13	Total/NA	Water	SM 4500 F C	
400-144723-89	AX24267 MW-14	Total/NA	Water	SM 4500 F C	
400-144723-90	AX24268 MW-14 DUP	Total/NA	Water	SM 4500 F C	
400-144723-91	AX24269 MW-15	Total/NA	Water	SM 4500 F C	
400-144723-92	AX24270 MW-16	Total/NA	Water	SM 4500 F C	
400-144723-93	AX24271 MW-19	Total/NA	Water	SM 4500 F C	
MB 400-374123/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374123/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144729-A-19 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144729-A-19 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-144729-A-30 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144729-A-30 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-82	AX24260 MW-6	Total/NA	Water	SM 4500 F C	
400-144723-94	AX24272 FB-1	Total/NA	Water	SM 4500 F C	
400-144723-96	AX24274 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-374155/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374155/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144723-82 MS	AX24260 MW-6	Total/NA	Water	SM 4500 F C	
400-144723-82 MSD	AX24260 MW-6	Total/NA	Water	SM 4500 F C	
400-144723-A-50 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144723-A-50 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-95	AX24273 MW-20	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: 400-144723-6
SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 374206 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-374206/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374206/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144723-95 MS	AX24273 MW-20	Total/NA	Water	SM 4500 F C	
400-144723-95 MSD	AX24273 MW-20	Total/NA	Water	SM 4500 F C	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

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

TestAmerica Job ID: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-373712/6
Matrix: Water
Analysis Batch: 373712

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			10/28/17 09:00	1

Lab Sample ID: LCS 400-373712/7
Matrix: Water
Analysis Batch: 373712

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	30.4		mg/L		101	90 - 110

Lab Sample ID: MRL 400-373712/3
Matrix: Water
Analysis Batch: 373712

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	2.13		mg/L		107	50 - 150

Lab Sample ID: 400-144723-82 MS
Matrix: Water
Analysis Batch: 373712

Client Sample ID: AX24260 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.9	J	10.0	13.1		mg/L		111	73 - 120

Lab Sample ID: 400-144723-82 MSD
Matrix: Water
Analysis Batch: 373712

Client Sample ID: AX24260 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	1.9	J	10.0	12.7		mg/L		107	73 - 120	3	8

Lab Sample ID: 400-144723-A-53 MS
Matrix: Water
Analysis Batch: 373712

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	1.0	J	10.0	12.2		mg/L		112	73 - 120

Lab Sample ID: 400-144723-A-53 MSD
Matrix: Water
Analysis Batch: 373712

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	1.0	J	10.0	12.4		mg/L		113	73 - 120	1	8

Lab Sample ID: MB 400-373713/6
Matrix: Water
Analysis Batch: 373713

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			10/28/17 10:42	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: LCS 400-373713/7
Matrix: Water
Analysis Batch: 373713

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 400-373713/3
Matrix: Water
Analysis Batch: 373713

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	1.46	J	mg/L		73	50 - 150

Lab Sample ID: 400-144723-95 MS
Matrix: Water
Analysis Batch: 373713

Client Sample ID: AX24273 MW-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.8		10.0	15.5		mg/L		107	73 - 120

Lab Sample ID: 400-144723-95 MSD
Matrix: Water
Analysis Batch: 373713

Client Sample ID: AX24273 MW-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.8		10.0	16.6		mg/L		118	73 - 120	7	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-374123/3
Matrix: Water
Analysis Batch: 374123

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			10/31/17 14:06	1

Lab Sample ID: LCS 400-374123/4
Matrix: Water
Analysis Batch: 374123

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: 400-144729-A-19 MS
Matrix: Water
Analysis Batch: 374123

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
Fluoride	0.36		1.00	1.33		mg/L		97	75 - 125

QC Sample Results

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

TestAmerica Job ID: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-144729-A-19 MSD
Matrix: Water
Analysis Batch: 374123

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
Fluoride	0.36		1.00	1.33		mg/L		97	75 - 125	0	4

Lab Sample ID: 400-144729-A-30 MS
Matrix: Water
Analysis Batch: 374123

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
Fluoride	0.34		1.00	1.28		mg/L		94	75 - 125

Lab Sample ID: 400-144729-A-30 MSD
Matrix: Water
Analysis Batch: 374123

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
Fluoride	0.34		1.00	1.26		mg/L		92	75 - 125	2	4

Lab Sample ID: MB 400-374155/3
Matrix: Water
Analysis Batch: 374155

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			10/31/17 15:15	1

Lab Sample ID: LCS 400-374155/4
Matrix: Water
Analysis Batch: 374155

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: 400-144723-82 MS
Matrix: Water
Analysis Batch: 374155

Client Sample ID: AX24260 MW-6
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	1.10		mg/L		96	75 - 125

Lab Sample ID: 400-144723-82 MSD
Matrix: Water
Analysis Batch: 374155

Client Sample ID: AX24260 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	0.14		1.00	1.10		mg/L		96	75 - 125	0	4

Lab Sample ID: 400-144723-A-50 MS
Matrix: Water
Analysis Batch: 374155

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
Fluoride	0.14	F2	1.00	1.12		mg/L		98	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144723-A-50 MSD
Matrix: Water
Analysis Batch: 374155

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
Fluoride	0.14	F2	1.00	0.940	F2	mg/L		80	75 - 125	17	4

Lab Sample ID: MB 400-374206/3
Matrix: Water
Analysis Batch: 374206

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			11/01/17 07:27	1

Lab Sample ID: LCS 400-374206/4
Matrix: Water
Analysis Batch: 374206

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: 400-144723-95 MS
Matrix: Water
Analysis Batch: 374206

Client Sample ID: AX24273 MW-20
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: 400-144723-95 MSD
Matrix: Water
Analysis Batch: 374206

Client Sample ID: AX24273 MW-20
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	1.10		mg/L		96	75 - 125	2	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-373735/6
Matrix: Water
Analysis Batch: 373735

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			10/28/17 11:55	1

Lab Sample ID: LCS 400-373735/7
Matrix: Water
Analysis Batch: 373735

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	14.4		mg/L		96	90 - 110

QC Sample Results

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

TestAmerica Job ID: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-373735/3
Matrix: Water
Analysis Batch: 373735

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	3.80	J	mg/L		76	50 - 150

Lab Sample ID: MB 400-373750/6
Matrix: Water
Analysis Batch: 373750

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			10/28/17 14:06	1

Lab Sample ID: LCS 400-373750/7
Matrix: Water
Analysis Batch: 373750

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	13.5		mg/L		90	90 - 110

Lab Sample ID: MRL 400-373750/3
Matrix: Water
Analysis Batch: 373750

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	3.67	J	mg/L		73	50 - 150

Lab Sample ID: 400-144723-82 MS
Matrix: Water
Analysis Batch: 373750

Client Sample ID: AX24260 MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1900	F1	600	1780	F1	mg/L		-13	77 - 128

Lab Sample ID: 400-144723-82 MSD
Matrix: Water
Analysis Batch: 373750

Client Sample ID: AX24260 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
Sulfate	1900	F1	600	1770	F1	mg/L		-15	77 - 128	1	5

Lab Sample ID: 400-144723-95 MS
Matrix: Water
Analysis Batch: 373750

Client Sample ID: AX24273 MW-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1500	F1	600	1440	F1	mg/L		-7	77 - 128

Lab Sample ID: 400-144723-95 MSD
Matrix: Water
Analysis Batch: 373750

Client Sample ID: AX24273 MW-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1500	F1	600	1370	F1	mg/L		-18	77 - 128	5	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144723-A-53 MS
Matrix: Water
Analysis Batch: 373750

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	1800	F1	600	1820	F1	mg/L		7	77 - 128

Lab Sample ID: 400-144723-A-53 MSD
Matrix: Water
Analysis Batch: 373750

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	1800	F1	600	1730	F1	mg/L		-7	77 - 128	5	5

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Chain of Custody Record

Client Information		Sampler: Nick Pils/Anthony Goggins		Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):					
Client Contact: Keith Komegay		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com	GOC No: 400-56525-24537-1					
Company: Alabama Power General Test Laboratory		Due Date Requested: 11/1/2017		Page: Page 1 of 1						
Address: 744 County Rd 87 GSC #8		TAT Requested (days):		Job #:						
City: Callera		Routine		Preservation Codes:						
State, Zip: AL, 35040		PO #:		A - HCL M - Hexano B - NaOH N - Nbre C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2OAS E - NaHSO4 R - Na2SO3 F - MeOH S - H2SO4 G - Amchlor T - TSP Dodecahydrate H - Ascorbic Acid U - Acetone I - Ice J - DI Water V - MCAA K - EDTA W - ph 4-5 L - EDA Z - other (specify) Other:						
Email: flkk@al.com		WO #:		Special Instructions/Note:						
Project Name: CCR		Project #: 40007143		Total Number of containers						
Site: Gorgas Landfill		SSOW#:		MW-5 MW-6 MW-7 MW-8 MW-1B MW-7DUP (Sample Duplicate) FB-2 (Field Blank) MW-13						
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM 4500 F.C.	SM 4500 C.E.	SM 4500 SO4.E	Analysis Requested
AX24259	10/15/17	1007	G	Water	X	X	X	X	X	
AX24260	10/15/17	1109	G	Water	Y	X	X	X	X	
AX24261	10/15/17	1227	G	Water	X	X	X	X	X	
AX24262	10/15/17	1318	G	Water	X	X	X	X	X	
AX24263	10/15/17	1433	G	Water	X	X	X	X	X	
AX24264	10/15/17	1227	G	Water	X	X	X	X	X	
AX24265	10/15/17	1302	G	Water	X	X	X	X	X	
AX24266	10/15/17	0852	G	Water	X	X	X	X	X	
Possible Hazard Identification										
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Unknown <input type="checkbox"/> Acetone/Alcohol										
Deliverable Requested: I, II, III, IV, Other (specify)										
Empty Kit Relinquished by: Date/Time: 10/17/17 12:30 Company APC										
Relinquished by: Keith Komegay Date/Time: 10-18-17 10:35 Company TA										
Relinquished by: Date/Time: Company										
Relinquished by: Date/Time: Company										
Custody Seals Intact: <input type="checkbox"/> Custody Seal No.: 10										



Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-56525-24537.1	
Client Contact: Keith Komegav		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		City: Calera		State, Zip: AL, 35040	
Phone: 205-664-6004		PO #: 40007143		WO #: 40007143		Project #: 40007143	
Email: fkkorn@alabamapower.com		SSOW#: 40007143		Due Date Requested: 11/1/2017		TAT Requested (days):	
Project Name: CCR		Site: Gorgas Landfill		Sample Date		Sample Time	
Sample Identification		Sample Type (C=Comp, G=Grab)		Matrix (W=Water, S=Solid, O=Other, B=Blood, P=Plasma, A=Air)		Preservation Code:	
AX24267	10/15/17	0943	G	Water			
AX24268	10/15/17	0943	G	Water			
AX24269	10/15/17	1047	G	Water			
AX24270	10/15/17	1147	G	Water			
AX24271	10/15/17	1245	G	Water			
AX24272	10/15/17	1230	G	Water			
AX24273	10/15/17	1341	G	Water			
AX24274	10/15/17	1405	G	Water			
Possible Hazard Identification		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)		Special Instructions/Note:	
Empty Kit Relinquished by: Relinquished by: Keith Komegav		Date/Time: 10/17/17 12:00		Company: APC		Method of Shipment:	
Relinquished by:		Date/Time:		Company:		Daily Time: 10-18-17 1035	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Custody Seals Intact: Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 3.3°C RR 7 TO		Received by: [Signature]		Date/Time: 10-18-17 1035	



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-6
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

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	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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 <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: 400-144723-6
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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



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: 400-144723-5

TestAmerica SDG: Plant Gorgas CCB Landfills

Client Project/Site: CCR Plant Gorgas

For:

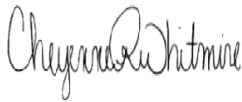
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

11/16/2017 3:21:27 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@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: 400-144723-5
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-5

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-5

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-333592. The following samples were reduced due to limited volume: AX24243 MW-5 (400-144723-65), AX24244 MW-6 (400-144723-66), AX24244 MW-6 (400-144723-66[MS]), AX24244 MW-6 (400-144723-66[MSD]), AX24245 MW-7 (400-144723-67), AX24246 MW-8 (400-144723-68), AX24247 MW-18 (400-144723-69), AX24248 MW-7 DUP (400-144723-70), AX24249 FB-2 (400-144723-71), AX24250 MW-13 (400-144723-72), AX24251 MW-14 (400-144723-73), AX24252 MW-14 DUP (400-144723-74), AX24253 MW-15 (400-144723-75), AX24254 MW-16 (400-144723-76), AX24255 MW-19 (400-144723-77), AX24256 FB-1 (400-144723-78), AX24257 MW-20 (400-144723-79) and AX24258 EB-1 (400-144723-80).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-333585. The following samples were reduced due to limited volume: AX24243 MW-5 (400-144723-65), AX24244 MW-6 (400-144723-66), AX24244 MW-6 (400-144723-66[MS]), AX24244 MW-6 (400-144723-66[MSD]), AX24245 MW-7 (400-144723-67), AX24246 MW-8 (400-144723-68), AX24247 MW-18 (400-144723-69), AX24248 MW-7 DUP (400-144723-70), AX24249 FB-2 (400-144723-71), AX24250 MW-13 (400-144723-72), AX24251 MW-14 (400-144723-73), AX24252 MW-14 DUP (400-144723-74), AX24253 MW-15 (400-144723-75), AX24254 MW-16 (400-144723-76), AX24255 MW-19 (400-144723-77), AX24256 FB-1 (400-144723-78), AX24257 MW-20 (400-144723-79) and AX24258 EB-1 (400-144723-80).

Method Summary

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

TestAmerica Job ID: 400-144723-5
SDG: Plant Gorgas CCB Landfills

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: 400-144723-5
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-65	AX24243 MW-5	Water	10/15/17 10:07	10/18/17 10:35
400-144723-66	AX24244 MW-6	Water	10/15/17 11:09	10/18/17 10:35
400-144723-67	AX24245 MW-7	Water	10/15/17 12:27	10/18/17 10:35
400-144723-68	AX24246 MW-8	Water	10/15/17 13:18	10/18/17 10:35
400-144723-69	AX24247 MW-18	Water	10/15/17 14:33	10/18/17 10:35
400-144723-70	AX24248 MW-7 DUP	Water	10/15/17 12:27	10/18/17 10:35
400-144723-71	AX24249 FB-2	Water	10/15/17 13:02	10/18/17 10:35
400-144723-72	AX24250 MW-13	Water	10/15/17 08:52	10/18/17 10:35
400-144723-73	AX24251 MW-14	Water	10/15/17 09:43	10/18/17 10:35
400-144723-74	AX24252 MW-14 DUP	Water	10/15/17 09:43	10/18/17 10:35
400-144723-75	AX24253 MW-15	Water	10/15/17 10:47	10/18/17 10:35
400-144723-76	AX24254 MW-16	Water	10/15/17 11:47	10/18/17 10:35
400-144723-77	AX24255 MW-19	Water	10/15/17 12:45	10/18/17 10:35
400-144723-78	AX24256 FB-1	Water	10/15/17 12:30	10/18/17 10:35
400-144723-79	AX24257 MW-20	Water	10/15/17 13:41	10/18/17 10:35
400-144723-80	AX24258 EB-1	Water	10/15/17 14:05	10/18/17 10:35

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24243 MW-5

Lab Sample ID: 400-144723-65

Date Collected: 10/15/17 10:07

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.218		0.102	0.103	1.00	0.108	pCi/L	10/24/17 09:20	11/15/17 07:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					10/24/17 09:20	11/15/17 07:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.588		0.302	0.306	1.00	0.432	pCi/L	10/24/17 09:46	10/30/17 14:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					10/24/17 09:46	10/30/17 14:00	1
Y Carrier	79.6		40 - 110					10/24/17 09:46	10/30/17 14:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.806		0.319	0.323	5.00	0.432	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24244 MW-6

Lab Sample ID: 400-144723-66

Date Collected: 10/15/17 11:09

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.252		0.110	0.112	1.00	0.113	pCi/L	10/24/17 09:20	11/15/17 07:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					10/24/17 09:20	11/15/17 07:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.972		0.357	0.368	1.00	0.482	pCi/L	10/24/17 09:46	10/30/17 14:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					10/24/17 09:46	10/30/17 14:00	1
Y Carrier	81.5		40 - 110					10/24/17 09:46	10/30/17 14:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.22		0.374	0.385	5.00	0.482	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24245 MW-7

Lab Sample ID: 400-144723-67

Date Collected: 10/15/17 12:27

Matrix: Water

Date Received: 10/18/17 10:35

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		0.0792	0.0801	1.00	0.0971	pCi/L	10/24/17 09:20	11/15/17 08:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					10/24/17 09:20	11/15/17 08:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.317	U	0.322	0.323	1.00	0.523	pCi/L	10/24/17 09:46	10/30/17 14:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					10/24/17 09:46	10/30/17 14:00	1
Y Carrier	76.6		40 - 110					10/24/17 09:46	10/30/17 14:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.450	U	0.332	0.333	5.00	0.523	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24246 MW-8

Lab Sample ID: 400-144723-68

Date Collected: 10/15/17 13:18

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.105		0.0756	0.0762	1.00	0.103	pCi/L	10/24/17 09:20	11/15/17 08:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/24/17 09:20	11/15/17 08:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.223	U	0.305	0.306	1.00	0.510	pCi/L	10/24/17 09:46	10/30/17 14:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/24/17 09:46	10/30/17 14:00	1
Y Carrier	79.6		40 - 110					10/24/17 09:46	10/30/17 14:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.327	U	0.314	0.315	5.00	0.510	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24247 MW-18

Lab Sample ID: 400-144723-69

Date Collected: 10/15/17 14:33

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0301	U	0.0598	0.0599	1.00	0.109	pCi/L	10/24/17 09:20	11/15/17 08:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					10/24/17 09:20	11/15/17 08:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.117	U	0.247	0.247	1.00	0.474	pCi/L	10/24/17 09:46	10/30/17 14:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					10/24/17 09:46	10/30/17 14:00	1
Y Carrier	79.6		40 - 110					10/24/17 09:46	10/30/17 14:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0872	U	0.254	0.254	5.00	0.474	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24248 MW-7 DUP

Lab Sample ID: 400-144723-70

Date Collected: 10/15/17 12:27

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.131		0.0862	0.0870	1.00	0.115	pCi/L	10/24/17 09:20	11/15/17 08:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/24/17 09:20	11/15/17 08:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.260	U	0.289	0.290	1.00	0.473	pCi/L	10/24/17 09:46	10/30/17 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/24/17 09:46	10/30/17 14:01	1
Y Carrier	77.0		40 - 110					10/24/17 09:46	10/30/17 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	0.391	U	0.302	0.303	5.00	0.473	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24249 FB-2

Lab Sample ID: 400-144723-71

Date Collected: 10/15/17 13:02

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00395	U	0.0407	0.0407	1.00	0.0931	pCi/L	10/24/17 09:20	11/15/17 08:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					10/24/17 09:20	11/15/17 08:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.139	U	0.258	0.258	1.00	0.440	pCi/L	10/24/17 09:46	10/30/17 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					10/24/17 09:46	10/30/17 14:01	1
Y Carrier	80.4		40 - 110					10/24/17 09:46	10/30/17 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	0.135	U	0.261	0.261	5.00	0.440	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24250 MW-13

Lab Sample ID: 400-144723-72

Date Collected: 10/15/17 08:52

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.110		0.0794	0.0800	1.00	0.109	pCi/L	10/24/17 09:20	11/15/17 08:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					10/24/17 09:20	11/15/17 08:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0879	U	0.311	0.311	1.00	0.543	pCi/L	10/24/17 09:46	10/30/17 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					10/24/17 09:46	10/30/17 14:01	1
Y Carrier	79.3		40 - 110					10/24/17 09:46	10/30/17 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	0.198	U	0.321	0.321	5.00	0.543	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24251 MW-14

Lab Sample ID: 400-144723-73

Date Collected: 10/15/17 09:43

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0313	U	0.0599	0.0599	1.00	0.108	pCi/L	10/24/17 09:20	11/15/17 08:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/24/17 09:20	11/15/17 08:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.280	U	0.298	0.299	1.00	0.487	pCi/L	10/24/17 09:46	10/30/17 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/24/17 09:46	10/30/17 14:01	1
Y Carrier	80.4		40 - 110					10/24/17 09:46	10/30/17 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	0.311	U	0.304	0.305	5.00	0.487	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24252 MW-14 DUP

Lab Sample ID: 400-144723-74

Date Collected: 10/15/17 09:43

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.131		0.0756	0.0765	1.00	0.0883	pCi/L	10/24/17 09:20	11/15/17 08:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/24/17 09:20	11/15/17 08:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.611		0.320	0.325	1.00	0.469	pCi/L	10/24/17 09:46	10/30/17 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/24/17 09:46	10/30/17 14:01	1
Y Carrier	75.9		40 - 110					10/24/17 09:46	10/30/17 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	0.742		0.329	0.334	5.00	0.469	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24253 MW-15

Lab Sample ID: 400-144723-75

Date Collected: 10/15/17 10:47

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0707	U	0.0749	0.0752	1.00	0.119	pCi/L	10/24/17 09:20	11/15/17 08:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					10/24/17 09:20	11/15/17 08:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.699		0.394	0.399	1.00	0.594	pCi/L	10/24/17 09:46	10/30/17 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					10/24/17 09:46	10/30/17 14:01	1
Y Carrier	72.1		40 - 110					10/24/17 09:46	10/30/17 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	0.769		0.401	0.406	5.00	0.594	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24254 MW-16

Lab Sample ID: 400-144723-76

Date Collected: 10/15/17 11:47

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0719	U	0.0684	0.0687	1.00	0.104	pCi/L	10/24/17 09:20	11/15/17 08:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					10/24/17 09:20	11/15/17 08:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.129	U	0.306	0.306	1.00	0.570	pCi/L	10/24/17 09:46	10/30/17 14:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					10/24/17 09:46	10/30/17 14:01	1
Y Carrier	79.3		40 - 110					10/24/17 09:46	10/30/17 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	-0.0572	U	0.314	0.314	5.00	0.570	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24255 MW-19

Lab Sample ID: 400-144723-77

Date Collected: 10/15/17 12:45

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.116		0.0784	0.0791	1.00	0.103	pCi/L	10/24/17 09:20	11/15/17 08:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					10/24/17 09:20	11/15/17 08:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.943		0.410	0.419	1.00	0.597	pCi/L	10/24/17 09:46	10/30/17 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					10/24/17 09:46	10/30/17 14:02	1
Y Carrier	84.5		40 - 110					10/24/17 09:46	10/30/17 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	1.06		0.417	0.426	5.00	0.597	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24256 FB-1

Lab Sample ID: 400-144723-78

Date Collected: 10/15/17 12:30

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00395	U	0.0440	0.0440	1.00	0.0984	pCi/L	10/24/17 09:20	11/15/17 08:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/24/17 09:20	11/15/17 08:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.356	U	0.330	0.332	1.00	0.533	pCi/L	10/24/17 09:46	10/30/17 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/24/17 09:46	10/30/17 14:02	1
Y Carrier	78.9		40 - 110					10/24/17 09:46	10/30/17 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	0.352	U	0.333	0.335	5.00	0.533	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24257 MW-20

Lab Sample ID: 400-144723-79

Date Collected: 10/15/17 13:41

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.268		0.0967	0.0997	1.00	0.0719	pCi/L	10/24/17 09:20	11/15/17 08:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/24/17 09:20	11/15/17 08:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.667		0.327	0.333	1.00	0.474	pCi/L	10/24/17 09:46	10/30/17 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/24/17 09:46	10/30/17 14:02	1
Y Carrier	76.3		40 - 110					10/24/17 09:46	10/30/17 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	0.935		0.341	0.348	5.00	0.474	pCi/L		11/16/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24258 EB-1

Lab Sample ID: 400-144723-80

Date Collected: 10/15/17 14:05

Matrix: Water

Date Received: 10/18/17 10:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0712	U	0.0582	0.0586	1.00	0.0802	pCi/L	10/24/17 09:20	11/15/17 08:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/24/17 09:20	11/15/17 08:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.233	U	0.256	0.257	1.00	0.420	pCi/L	10/24/17 09:46	10/30/17 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/24/17 09:46	10/30/17 14:02	1
Y Carrier	77.8		40 - 110					10/24/17 09:46	10/30/17 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	0.304	U	0.263	0.264	5.00	0.420	pCi/L		11/16/17 10:31	1

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-5
SDG: Plant Gorgas CCB Landfills

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: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24243 MW-5

Lab Sample ID: 400-144723-65

Date Collected: 10/15/17 10:07

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337241	11/15/17 07:21	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24244 MW-6

Lab Sample ID: 400-144723-66

Date Collected: 10/15/17 11:09

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337241	11/15/17 07:21	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24245 MW-7

Lab Sample ID: 400-144723-67

Date Collected: 10/15/17 12:27

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:05	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24246 MW-8

Lab Sample ID: 400-144723-68

Date Collected: 10/15/17 13:18

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:05	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-5
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24247 MW-18

Lab Sample ID: 400-144723-69

Date Collected: 10/15/17 14:33

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:05	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24248 MW-7 DUP

Lab Sample ID: 400-144723-70

Date Collected: 10/15/17 12:27

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:05	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:01	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24249 FB-2

Lab Sample ID: 400-144723-71

Date Collected: 10/15/17 13:02

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:05	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:01	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24250 MW-13

Lab Sample ID: 400-144723-72

Date Collected: 10/15/17 08:52

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:01	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24251 MW-14

Lab Sample ID: 400-144723-73

Date Collected: 10/15/17 09:43

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:01	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24252 MW-14 DUP

Lab Sample ID: 400-144723-74

Date Collected: 10/15/17 09:43

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:01	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24253 MW-15

Lab Sample ID: 400-144723-75

Date Collected: 10/15/17 10:47

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:01	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24254 MW-16

Lab Sample ID: 400-144723-76

Date Collected: 10/15/17 11:47

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:01	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24255 MW-19

Lab Sample ID: 400-144723-77

Date Collected: 10/15/17 12:45

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24256 FB-1

Lab Sample ID: 400-144723-78

Date Collected: 10/15/17 12:30

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337170	11/15/17 08:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24257 MW-20

Lab Sample ID: 400-144723-79

Date Collected: 10/15/17 13:41

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337171	11/15/17 08:07	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	RTM	TAL SL

Client Sample ID: AX24258 EB-1

Lab Sample ID: 400-144723-80

Date Collected: 10/15/17 14:05

Matrix: Water

Date Received: 10/18/17 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333585	10/24/17 09:20	LDE	TAL SL
Total/NA	Analysis	9315		1	337171	11/15/17 08:07	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333592	10/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9320		1	334709	10/30/17 14:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	337560	11/16/17 10:31	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: 400-144723-5
SDG: Plant Gorgas CCB Landfills

Rad

Prep Batch: 333585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-65	AX24243 MW-5	Total/NA	Water	PrecSep-21	
400-144723-66	AX24244 MW-6	Total/NA	Water	PrecSep-21	
400-144723-67	AX24245 MW-7	Total/NA	Water	PrecSep-21	
400-144723-68	AX24246 MW-8	Total/NA	Water	PrecSep-21	
400-144723-69	AX24247 MW-18	Total/NA	Water	PrecSep-21	
400-144723-70	AX24248 MW-7 DUP	Total/NA	Water	PrecSep-21	
400-144723-71	AX24249 FB-2	Total/NA	Water	PrecSep-21	
400-144723-72	AX24250 MW-13	Total/NA	Water	PrecSep-21	
400-144723-73	AX24251 MW-14	Total/NA	Water	PrecSep-21	
400-144723-74	AX24252 MW-14 DUP	Total/NA	Water	PrecSep-21	
400-144723-75	AX24253 MW-15	Total/NA	Water	PrecSep-21	
400-144723-76	AX24254 MW-16	Total/NA	Water	PrecSep-21	
400-144723-77	AX24255 MW-19	Total/NA	Water	PrecSep-21	
400-144723-78	AX24256 FB-1	Total/NA	Water	PrecSep-21	
400-144723-79	AX24257 MW-20	Total/NA	Water	PrecSep-21	
400-144723-80	AX24258 EB-1	Total/NA	Water	PrecSep-21	
MB 160-333585/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-333585/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-144723-66 MS	AX24244 MW-6	Total/NA	Water	PrecSep-21	
400-144723-66 MSD	AX24244 MW-6	Total/NA	Water	PrecSep-21	

Prep Batch: 333592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-65	AX24243 MW-5	Total/NA	Water	PrecSep_0	
400-144723-66	AX24244 MW-6	Total/NA	Water	PrecSep_0	
400-144723-67	AX24245 MW-7	Total/NA	Water	PrecSep_0	
400-144723-68	AX24246 MW-8	Total/NA	Water	PrecSep_0	
400-144723-69	AX24247 MW-18	Total/NA	Water	PrecSep_0	
400-144723-70	AX24248 MW-7 DUP	Total/NA	Water	PrecSep_0	
400-144723-71	AX24249 FB-2	Total/NA	Water	PrecSep_0	
400-144723-72	AX24250 MW-13	Total/NA	Water	PrecSep_0	
400-144723-73	AX24251 MW-14	Total/NA	Water	PrecSep_0	
400-144723-74	AX24252 MW-14 DUP	Total/NA	Water	PrecSep_0	
400-144723-75	AX24253 MW-15	Total/NA	Water	PrecSep_0	
400-144723-76	AX24254 MW-16	Total/NA	Water	PrecSep_0	
400-144723-77	AX24255 MW-19	Total/NA	Water	PrecSep_0	
400-144723-78	AX24256 FB-1	Total/NA	Water	PrecSep_0	
400-144723-79	AX24257 MW-20	Total/NA	Water	PrecSep_0	
400-144723-80	AX24258 EB-1	Total/NA	Water	PrecSep_0	
MB 160-333592/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-333592/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-144723-66 MS	AX24244 MW-6	Total/NA	Water	PrecSep_0	
400-144723-66 MSD	AX24244 MW-6	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-333585/1-A
Matrix: Water
Analysis Batch: 337241

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333585

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2335		0.106	0.108	1.00	0.111	pCi/L	10/24/17 09:20	11/15/17 07:21	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/24/17 09:20	11/15/17 07:21	1

Lab Sample ID: LCS 160-333585/2-A
Matrix: Water
Analysis Batch: 337241

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333585

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.7	15.26		1.56	1.00	0.117	pCi/L	97	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	97.9		40 - 110						

Lab Sample ID: 400-144723-66 MS
Matrix: Water
Analysis Batch: 337241

Client Sample ID: AX24244 MW-6
Prep Type: Total/NA
Prep Batch: 333585

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.252		15.8	16.23		1.65	1.00	0.117	pCi/L	101	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	97.1		40 - 110								

Lab Sample ID: 400-144723-66 MSD
Matrix: Water
Analysis Batch: 337170

Client Sample ID: AX24244 MW-6
Prep Type: Total/NA
Prep Batch: 333585

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.252		15.7	14.22		1.45	1.00	0.106	pCi/L	89	75 - 138	0.65	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	95.3		40 - 110										

QC Sample Results

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

TestAmerica Job ID: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-333592/1-A
Matrix: Water
Analysis Batch: 334709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333592

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1432	U	0.263	0.263	1.00	0.449	pCi/L	10/24/17 09:46	10/30/17 13:59	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/24/17 09:46	10/30/17 13:59	1
Y Carrier	77.0		40 - 110					10/24/17 09:46	10/30/17 13:59	1

Lab Sample ID: LCS 160-333592/2-A
Matrix: Water
Analysis Batch: 334709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333592

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	11.8	13.08		1.52	1.00	0.509	pCi/L	111	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	97.9		40 - 110						
Y Carrier	76.3		40 - 110						

Lab Sample ID: 400-144723-66 MS
Matrix: Water
Analysis Batch: 334709

Client Sample ID: AX24244 MW-6
Prep Type: Total/NA
Prep Batch: 333592

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.972		11.8	12.82		1.47	1.00	0.464	pCi/L	100	45 - 150
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	97.1		40 - 110								
Y Carrier	82.2		40 - 110								

Lab Sample ID: 400-144723-66 MSD
Matrix: Water
Analysis Batch: 334709

Client Sample ID: AX24244 MW-6
Prep Type: Total/NA
Prep Batch: 333592

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.972		11.8	13.02		1.51	1.00	0.444	pCi/L	102	45 - 150	0.07	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	95.3		40 - 110										
Y Carrier	79.6		40 - 110										

Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Camer Tracking No(s):	
Sampler: Nick Pitts/Anthony Goggins		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-56525-24537.1	
Phone:				Page: Page 1 of 1	
Company: Alabama Power General Test Laboratory				Job #:	
Address: 744 County Rd 87 GSC #8					
City: Calera					
State, Zip: AL, 35040					
Phone: 205-664-6004					
Email: fkk@ame@sutherland.com					
Project #: 40007143					
CCR					
Site: Gorgas Landfill					

Analysis Requested		Due Date Requested: 11/9/2017		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>		Special Instructions/Note:	
TAT Requested (days):				9315_Raz26, 9320_Raz26, Raz26Raz26_GFPc		D			
PO #:				Matrix (Water, Solid, Other)		Preservation Code:			
WO #:				Sample Type (C=comp, G=grab)		Sample Time		Sample Date	
Project #:				G		1007		10/15/17	
SSOW#:				G		1109		10/15/17	
				G		1227		10/15/17	
				G		1318		10/15/17	
				G		1433		10/15/17	
				G		1227		10/15/17	
				G		1302		10/15/17	
				G		0852		10/15/17	

Sample Identification		Total Number of Containers		Special Instructions/Note:	
AX24243	Water	1	MW-5		
AX24244	Water	3	MW-6		
AX24245	Water	1	MW-7		
AX24246	Water	1	MW-8		
AX24247	Water	1	MW-18		
AX24248	Water	1	MW-7DUP (Sample Duplicate)		
AX24249	Water	1	FB-2 (Field Blank)		
AX24250	Water	1	MW-13		

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab
<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Unknown	Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Time:	
Relinquished by: Keith Komegay		Date: 10/17/2017 12:00	
Relinquished by:		Date/Time: 10-18-17 1035	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:	
Cooler Temperature(s) °C and Other Remarks: 20.4 IR7 TO		Company: TA	



Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Sample: Nick Pitts/Anthony Goggins		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-56525-24537.1	
Client Contact: Keith Kornegay		Phone:		Page: Page 1 of 1	
Company: Alabama Power General Test Laboratory		Due Date Requested: 11/8/2017		Job #:	
Address: 744 County Rd 87 GSC #8		TAT Requested (days):		Preservation Codes:	
City: Calera		PO #:		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:	
State, Zip: AL, 35040		WO #:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Phone: 205-664-6004		Project #:		Total Number of Containers	
Email: fkkorneg@southernco.com		40007143		1	
Project Name: CCR		SSOW#:		1	
Site: Gorgas Landfill		Sample Date		1	
Sample Identification		Sample Time		1	
AX24251		10/15/17		1	
AX24252		10/15/17		1	
AX24253		10/15/17		1	
AX24254		10/15/17		1	
AX24255		10/15/17		1	
AX24256		10/15/17		1	
AX24257		10/15/17		1	
AX24258		10/15/17		1	
Sample Type (C=Comp, G=grab)		Sample Matrix (W=water, S=solid, O=organic, A=Ally)		Special Instructions/Note:	
G		Water		MW-14	
G		Water		MW-14 Dup (Sample Duplicate)	
G		Water		MW-15	
G		Water		MW-16	
G		Water		MW-19	
G		Water		FB-1 (Field Blank)	
G		Water		MW-20	
G		Water		EB-1 (Equipment Blank)	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Special Instructions/Note:	
X		D		9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc	
Possible Hazard Identification		Sample Preservation Code:		Special Instructions/Note:	
<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		G		MW-14	
Deliverable Requested: I, II, III, IV, Other (specify)		Field Filtered Sample (Yes or No)		MW-14 Dup (Sample Duplicate)	
Empty Kit Reinquished by:		Field Filtered Sample (Yes or No)		MW-15	
Reinquished by: Keith Kornegay		Field Filtered Sample (Yes or No)		MW-16	
Reinquished by:		Field Filtered Sample (Yes or No)		MW-19	
Reinquished by:		Field Filtered Sample (Yes or No)		FB-1 (Field Blank)	
Custody Seal Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Field Filtered Sample (Yes or No)		MW-20	
Custody Seal No.:		Field Filtered Sample (Yes or No)		EB-1 (Equipment Blank)	
Special Instructions/QC Requirements:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Method of Shipment:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Date/Time: 10/17/2017 12:00		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Date/Time:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Date/Time:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Date/Time:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Company: APC		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Company:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Company:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Company:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Cooler Temperature(s) and Other Remarks: 20.9 28.7 To		Field Filtered Sample (Yes or No)		Special Instructions/Note:	



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-5
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

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	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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 <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: 400-144723-5
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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

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
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	11-30-17 *
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	12-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	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: 400-144723-5
SDG: Plant Gorgas CCB Landfills

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	02-21-18
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



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/16/2017 14:00

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 (1L): Radiological"/>		
Comments	<input type="text" value="No temperature preservation requirement."/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/15/2017	08:52	1	Groundwater		AX24250
MW-14	10/15/2017	09:43	1	Groundwater		AX24251
MW-14 Dup	10/15/2017	09:43	1	Sample Duplicate		AX24252
MW-15	10/15/2017	10:47	1	Groundwater		AX24253
MW-16	10/15/2017	11:47	1	Groundwater		AX24254
MW-19	10/15/2017	12:45	1	Groundwater		AX24255
FB-1	10/15/2017	12:30	1	Field Blank		AX24256
MW-20	10/15/2017	13:41	1	Groundwater		AX24257
EB-1	10/15/2017	14:05	1	Equipment Blank		AX24258

Relinquished By 	Received By Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkorneg@southemco.com, c=US Date: 2017.10.16 18:34:26 -0500</small>	Date/Time <input type="text" value="10/16/2017 14:00"/> <input type="text" value="10/16/2017 18:34"/> <input type="text"/>
-------------------------	---	---

SmarTroll ID <input type="text" value="4696-23443-3-2"/>	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> Cooler Temp <input type="text" value="NA"/> Thermometer ID <input type="text" value="NA"/> pH Strip ID <input type="text" value="6153-32041-10-8"/>
Turbidity ID <input type="text" value="4677-23342-4-1"/>	



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/16/2017 15:00

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-6. No temperature preservation requirement."/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	10/15/2017	10:07	1	Groundwater		AX24243
MW-6	10/15/2017	11:09	3	Groundwater		AX24244
MW-7	10/15/2017	12:27	1	Groundwater		AX24245
MW-8	10/15/2017	13:18	1	Groundwater		AX24246
MW-18	10/15/2017	14:33	1	Groundwater		AX24247
MW-7DUP	10/15/2017	12:27	1	Sample Duplicate		AX24248
FB-2	10/15/2017	13:02	1	Field Blank		AX24249

Relinquished By	Received By	Date/Time
		10/16/2017 11:15
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkorneg@southernco.com, c=US Date: 2017.10.16 18:32:00 -0500</small>	10/16/2017 18:32

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="3901-20009-2-1"/>	Cooler Temp	<input type="text" value="NA"/>
		Thermometer ID	<input type="text" value="NA"/>
		pH Strip ID	<input type="text" value="6153-32041-10-8"/>

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_1124

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1124

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 anions were outsourced to Test America, Pensacola for analysis. Below is the case narrative provided by Test America.

Job Narrative
400-144723-8
General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 374155 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits. RPD Limit is 4, RPD value is 17.

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX24406 MW-8 (400-144723-116). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373750 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: AX24403 MW-5 (400-144723-113), AX24404 MW-6 (400-144723-114), AX24405 MW-7 (400-144723-115), AX24406 MW-8 (400-144723-116), AX24407 MW-18 (400-144723-117), AX24408 MW-7 DUP (400-144723-118), AX24410 MW-13 (400-144723-120), AX24410 MW-13 (400-144723-120[MS]), AX24410 MW-13 (400-144723-120[MSD]), AX24411 MW-13 DUP (400-144723-121), AX24412 MW-14 (400-144723-122), AX24413 MW-15 (400-144723-123), (400-144723-A-53 MS), (400-144723-A-53 MSD), AX24414 MW-16 (400-144723-124), AX24416 MW-19 (400-144723-126), AX24417 MW-20 (400-144723-127), AX24417 MW-20 (400-144723-127[MS]) and AX24417 MW-20 (400-144723-127[MSD]). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Closing CCV (13.95) and CCB (-.7005) did not transfer properly to TALS but is reflected in the raw data attached to 373750.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373759 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.



Metals ICP

Gorgas Landfill

WMWGORLF_1124

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>
AX24403	20171019AK	WMWGORLF_1124
AX24404	20171019AK	WMWGORLF_1124
AX24405	20171019AK	WMWGORLF_1124
AX24406	20171019AK	WMWGORLF_1124
AX24407	20171019AK	WMWGORLF_1124
AX24408	20171019AK	WMWGORLF_1124
AX24409	20171019AK	WMWGORLF_1124
AX24410	20171019AK	WMWGORLF_1124
AX24411	20171019AK	WMWGORLF_1124
AX24412	20171019AK	WMWGORLF_1124
AX24413	20171019BK	WMWGORLF_1124
AX24414	20171019BK	WMWGORLF_1124
AX24415	20171019BK	WMWGORLF_1124
AX24416	20171019BK	WMWGORLF_1124
AX24417	20171019BK	WMWGORLF_1124
AX24418	20171019BK	WMWGORLF_1124

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

General Quality Control Procedures:

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



- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- An additional Rinse was added between samples for monitoring Lithium due to possible matrix issues.
- 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	AX24412

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 dilution to compensate for any matrix effects. The following samples were further 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>
AX24403	Calcium	x10
AX24404	Calcium	x100
AX24405	Calcium	x10
AX24406	Calcium	x10
AX24407	Calcium	x10
AX24408	Calcium	x10
AX24410	Calcium	x10
AX24411	Calcium	x10
AX24412	Calcium	x10

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



AX24412MS	Calcium	x10
AX24412MSD	Calcium	x10
AX24413	Calcium	x10
AX24414	Calcium	x10
AX24416	Calcium	x10
AX24417	Calcium	x10

8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1124

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>
AX24403	604974	WMWGORLF_1124
AX24404	604974	WMWGORLF_1124
AX24405	604974	WMWGORLF_1124
AX24406	604974	WMWGORLF_1124
AX24407	604974	WMWGORLF_1124
AX24408	604974	WMWGORLF_1124
AX24409	604974	WMWGORLF_1124
AX24410	604974	WMWGORLF_1124
AX24411	604974	WMWGORLF_1124
AX24412	604974	WMWGORLF_1124
AX24413	604975	WMWGORLF_1124
AX24414	604975	WMWGORLF_1124
AX24415	604975	WMWGORLF_1124
AX24416	604975	WMWGORLF_1124
AX24417	604975	WMWGORLF_1124
AX24418	604975	WMWGORLF_1124

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 except for the last bracketing CCV for Co only on 10/19/2017. Analyst reported everything from the first run except Co of last six samples. Analyst Re-ran samples AX24412-AX24418 the next day on 10/20/2017 and reported Co only for that run.



- 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_1124

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>
AX24403	605057	WMWGORLF_1124
AX24404	605057	WMWGORLF_1124
AX24405	605057	WMWGORLF_1124
AX24406	605057	WMWGORLF_1124
AX24407	605057	WMWGORLF_1124
AX24408	605057	WMWGORLF_1124
AX24409	605057	WMWGORLF_1124
AX24410	605057	WMWGORLF_1124
AX24411	605057	WMWGORLF_1124
AX24412	605057	WMWGORLF_1124
AX24413	605058	WMWGORLF_1124
AX24414	605058	WMWGORLF_1124
AX24415	605058	WMWGORLF_1124
AX24416	605058	WMWGORLF_1124
AX24417	605058	WMWGORLF_1124
AX24418	605058	WMWGORLF_1124

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_1124

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>
AX24403	605008	WMWGORLF_1124
AX24404	605008	WMWGORLF_1124
AX24405	605008	WMWGORLF_1124
AX24406	605008	WMWGORLF_1124
AX24407	605008	WMWGORLF_1124
AX24408	605008	WMWGORLF_1124
AX24409	605008	WMWGORLF_1124
AX24410	605008	WMWGORLF_1124
AX24411	605008	WMWGORLF_1124
AX24412	605008	WMWGORLF_1124
AX24413	605009	WMWGORLF_1124
AX24414	605009	WMWGORLF_1124
AX24415	605009	WMWGORLF_1124
AX24416	605009	WMWGORLF_1124
AX24417	605009	WMWGORLF_1124
AX24418	605009	WMWGORLF_1124

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 0.5 mg 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 AX24409, AX24415, and AX24418, which were below the 2.5mg residue requirement.

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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24403

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	0.0101	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	J 0.0304	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	380	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	0.0963	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	J 0.000375	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			250	3980	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	1		0.60	2.00	8.1	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1		0.032	0.10	0.36	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	75		110	380	2300	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24403

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24412	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115	93.8	70 to 130	3.38	20	
AX24412	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115	87.6	70 to 130	1.78	20	
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115	88.3	70 to 130	1.88	20	
AX24412	Cobalt, Total	mg/L	0.00000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115	93.6	70 to 130	3.24	20	
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23	127	70 to 130	1.18	20	
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115	89.0	70 to 130	1.29	20	
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046	95.8	70 to 130	0.358	20	
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115	99.5	70 to 130	3.97	20	
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15	102	70 to 130	0.938	20	
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	2.14	20	
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115	92.3	70 to 130	1.93	20	
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115	95.7	70 to 130	2.43	20	
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75	-440	70 to 130	4.09	20	
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115	98.1	70 to 130	2.20	20	
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115	90.5	70 to 130	2.94	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24403

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Limit
AX24412	Solids, Dissolved	mg/L	5.00	25				3180	52.0	40 to 60			1.11 5

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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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24404

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8		5	0.0010	0.005	J 0.00482	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	0.0131	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7		2	0.02	0.1	J 0.0858	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		100	10	50	402	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	0.0274	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7		2	0.010	0.05	0.259	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C		1		250	3360	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E		1	0.60	2.00	J 1.8	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C		1	0.032	0.10	0.14	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E		60	84.0	300	1900	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24404

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24412	Chromium, Total	mg/L	0.0000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115	93.8	70 to 130	3.38	20	
AX24412	Cobalt, Total	mg/L	0.0000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115	93.6	70 to 130	3.24	20	
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23	127	70 to 130	1.18	20	
AX24412	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115	87.6	70 to 130	1.78	20	
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115	88.3	70 to 130	1.88	20	
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115	99.5	70 to 130	3.97	20	
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15	102	70 to 130	0.938	20	
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	2.14	20	
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115	89.0	70 to 130	1.29	20	
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046	95.8	70 to 130	0.358	20	
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115	92.3	70 to 130	1.93	20	
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115	95.7	70 to 130	2.43	20	
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75	-440	70 to 130	4.09	20	
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115	98.1	70 to 130	2.20	20	
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115	90.5	70 to 130	2.94	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24404

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
								Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX24412	Solids, Dissolved	mg/L	5.00	25				3180	52.0	40 to 60			1.11	5

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

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CC:

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 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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24405

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	J 0.00139	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	0.0122	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	J 0.0726	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	284	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	J 0.00371	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	0.122	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			125	2320	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	1		0.60	2.00	34	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1		0.032	0.10	0.20	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	60		84.0	300	1300	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24405

Sample	Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AX24412	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115	93.8	70 to 130	3.38	20	
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115	89.0	70 to 130	1.29	20	
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046	95.8	70 to 130	0.358	20	
AX24412	Cobalt, Total	mg/L	0.00000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115	93.6	70 to 130	3.24	20	
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23	127	70 to 130	1.18	20	
AX24412	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115	87.6	70 to 130	1.78	20	
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115	88.3	70 to 130	1.88	20	
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115	99.5	70 to 130	3.97	20	
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15	102	70 to 130	0.938	20	
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	2.14	20	
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115	92.3	70 to 130	1.93	20	
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115	95.7	70 to 130	2.43	20	
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75	-440	70 to 130	4.09	20	
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115	98.1	70 to 130	2.20	20	
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115	90.5	70 to 130	2.94	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24405

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24412	Solids, Dissolved	mg/L	5.00	25			3180	52.0	40 to 60	1.11	5

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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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24406

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	J 0.00106	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	0.0129	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	J 0.0707	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	299	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	J 0.00453	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	0.189	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			250	2740	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	10		6.00	20	140	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1		0.032	0.10	0.22	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	60		84.0	300	1400	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24406

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24412	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115		93.8	70 to 130	3.38	20
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115		89.0	70 to 130	1.29	20
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046		95.8	70 to 130	0.358	20
AX24412	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115		87.6	70 to 130	1.78	20
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115		88.3	70 to 130	1.88	20
AX24412	Cobalt, Total	mg/L	0.00000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115		93.6	70 to 130	3.24	20
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23		127	70 to 130	1.18	20
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115		92.3	70 to 130	1.93	20
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115		95.7	70 to 130	2.43	20
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75		-440	70 to 130	4.09	20
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115		98.1	70 to 130	2.20	20
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115		90.5	70 to 130	2.94	20
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115		99.5	70 to 130	3.97	20
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15		102	70 to 130	0.938	20
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115		101	70 to 130	2.14	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24406

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24412	Solids, Dissolved	mg/L	5.00	25			3180	52.0	40 to 60	1.11	5

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Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

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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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24407

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	J 0.00907	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7		2	0.02	0.1	J 0.0295	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		10	1.0	5.0	325	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7		2	0.010	0.05	0.0542	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	J 0.00270	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C		1		250	2610	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E		1	0.60	2.00	J 1.0	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C		1	0.032	0.10	0.31	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E		60	84.0	300	1900	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24407

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24412	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115	93.8	70 to 130	3.38	20
AX24412	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115	87.6	70 to 130	1.78	20
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115	88.3	70 to 130	1.88	20
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115	89.0	70 to 130	1.29	20
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046	95.8	70 to 130	0.358	20
AX24412	Cobalt, Total	mg/L	0.00000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115	93.6	70 to 130	3.24	20
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23	127	70 to 130	1.18	20
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115	92.3	70 to 130	1.93	20
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115	95.7	70 to 130	2.43	20
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75	-440	70 to 130	4.09	20
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115	98.1	70 to 130	2.20	20
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115	90.5	70 to 130	2.94	20
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115	99.5	70 to 130	3.97	20
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15	102	70 to 130	0.938	20
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	2.14	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24407

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
								Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX24412	Solids, Dissolved	mg/L	5.00	25				3180	52.0	40 to 60			1.11	5

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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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-7DUP

Laboratory ID Number: AX24408

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/23/2017	EPA 200.8			5	0.0010	0.005	J	0.00133	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01		0.0123	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7			2	0.02	0.1	J	0.0750	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7			10	1.0	5.0		285	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01	J	0.00384	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7			2	0.010	0.05		0.121	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/23/2017	SM 2540C			1		125		2360	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E			1	0.60	2.00		34	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C			1	0.032	0.10		0.21	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E			60	84.0	300		1300	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-7DUP

Laboratory ID Number: AX24408

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24412	Chromium, Total	mg/L	0.0000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115	93.8	70 to 130	3.38	20	
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115	89.0	70 to 130	1.29	20	
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046	95.8	70 to 130	0.358	20	
AX24412	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115	87.6	70 to 130	1.78	20	
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115	88.3	70 to 130	1.88	20	
AX24412	Cobalt, Total	mg/L	0.00000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115	93.6	70 to 130	3.24	20	
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23	127	70 to 130	1.18	20	
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115	92.3	70 to 130	1.93	20	
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115	95.7	70 to 130	2.43	20	
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75	-440	70 to 130	4.09	20	
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115	98.1	70 to 130	2.20	20	
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115	90.5	70 to 130	2.94	20	
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115	99.5	70 to 130	3.97	20	
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15	102	70 to 130	0.938	20	
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	2.14	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-7DUP

Laboratory ID Number: AX24408

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24412	Solids, Dissolved	mg/L	5.00	25			3180	52.0	40 to 60	1.11	5

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Alabama Power General Test Laboratory
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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24409

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/19/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	mg/L

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Alabama Power General Test Laboratory
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 Calera, AL 35040
 (205) 664-6032 or 6171
 FAX (205) 257-1654

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24409

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24412	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115	93.8	70 to 130	3.38	20	
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115	92.3	70 to 130	1.93	20	
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115	95.7	70 to 130	2.43	20	
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75	-440	70 to 130	4.09	20	
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115	98.1	70 to 130	2.20	20	
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115	90.5	70 to 130	2.94	20	
AX24412	Cobalt, Total	mg/L	0.00000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115	93.6	70 to 130	3.24	20	
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23	127	70 to 130	1.18	20	
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115	89.0	70 to 130	1.29	20	
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046	95.8	70 to 130	0.358	20	
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115	99.5	70 to 130	3.97	20	
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15	102	70 to 130	0.938	20	
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	2.14	20	
AX24412	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115	87.6	70 to 130	1.78	20	
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115	88.3	70 to 130	1.88	20	

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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: WMWGORLFFB
 Sample Date: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24409

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24412	Solids, Dissolved	mg/L	5.00	25			3180	52.0	40 to 60	1.11	5

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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24410

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	0.0131	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	J 0.0576	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	290	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	0.0163	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	J 0.0206	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			250	3150	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.5	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1		0.032	0.10	0.22	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	60		84.0	300	1800	mg/L

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Alabama Power General Test Laboratory
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 Calera, AL 35040
 (205) 664-6032 or 6171
 FAX (205) 257-1654

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24410

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24412	Chromium, Total	mg/L	0.0000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115	93.8	70 to 130	3.38	20	
AX24412	Cadmium, Total	mg/L	0.0000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115	87.6	70 to 130	1.78	20	
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115	88.3	70 to 130	1.88	20	
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115	89.0	70 to 130	1.29	20	
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046	95.8	70 to 130	0.358	20	
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115	99.5	70 to 130	3.97	20	
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15	102	70 to 130	0.938	20	
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	2.14	20	
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115	92.3	70 to 130	1.93	20	
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115	95.7	70 to 130	2.43	20	
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75	-440	70 to 130	4.09	20	
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115	98.1	70 to 130	2.20	20	
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115	90.5	70 to 130	2.94	20	
AX24412	Cobalt, Total	mg/L	0.00000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115	93.6	70 to 130	3.24	20	
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23	127	70 to 130	1.18	20	

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Laboratory certification ID: E571114

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24410

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX24412	Solids, Dissolved	mg/L	5.00	25			3180	52.0	40 to 60	1.11	5

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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

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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-13 DUP

Laboratory ID Number: AX24411

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01		0.0131	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2			0.02	0.1	J	0.0553	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10			1.0	5.0		303	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01		0.0165	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2			0.010	0.05	J	0.0200	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1				250		3110	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	1			0.60	2.00	J	1.5	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1			0.032	0.10		0.21	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	60			84.0	300		1700	mg/L

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Laboratory certification ID: E571114

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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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-13 DUP

Laboratory ID Number: AX24411

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24412	Chromium, Total	mg/L	0.0000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115		93.8	70 to 130	3.38	20
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115		89.0	70 to 130	1.29	20
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046		95.8	70 to 130	0.358	20
AX24412	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115		87.6	70 to 130	1.78	20
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115		88.3	70 to 130	1.88	20
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115		99.5	70 to 130	3.97	20
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15		102	70 to 130	0.938	20
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115		101	70 to 130	2.14	20
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115		92.3	70 to 130	1.93	20
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115		95.7	70 to 130	2.43	20
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75		-440	70 to 130	4.09	20
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115		98.1	70 to 130	2.20	20
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115		90.5	70 to 130	2.94	20
AX24412	Cobalt, Total	mg/L	0.00000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115		93.6	70 to 130	3.24	20
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23		127	70 to 130	1.18	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-13 DUP

Laboratory ID Number: AX24411

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24412	Solids, Dissolved	mg/L	5.00	25			3180	52.0	40 to 60	1.11	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24412

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8		5	0.0010	0.005	J 0.00135	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	0.0121	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7		2	0.02	0.1	J 0.0438	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		10	1.0	5.0	333	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	J 0.00981	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7		2	0.010	0.05	J 0.0352	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C		1		250	3110	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E		1	0.60	2.00	J 1.3	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C		1	0.032	0.10	0.25	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E		60	84.0	300	1800	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
 Recovery for Calcium is out of range. The spike amount is less than 30% of the sample amount. SGC 12/7/17

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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24412

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24412	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0938	0.0971	0.0998	0.085 to 0.115	93.8	70 to 130	3.38	20	
AX24412	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0890	0.0902	0.0907	0.085 to 0.115	89.0	70 to 130	1.29	20	
AX24412	Mercury, Total by CVAA	mg/L	-0.0000112	0.0005	0.004	0.00383	0.00382	0.00379	0.0034 to 0.0046	95.8	70 to 130	0.358	20	
AX24412	Cobalt, Total	mg/L	0.00000314	0.0044	0.10	0.103	0.107	0.0984	0.085 to 0.115	93.6	70 to 130	3.24	20	
AX24412	Lithium, Total	mg/L	-0.0000733	0.022	0.20	0.290	0.293	0.196	0.17 to 0.23	127	70 to 130	1.18	20	
AX24412	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.104	0.106	0.0994	0.085 to 0.115	92.3	70 to 130	1.93	20	
AX24412	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.0957	0.0980	0.107	0.085 to 0.115	95.7	70 to 130	2.43	20	
AX24412	Calcium, Total	mg/L	-0.00557	0.22	5.00	311	324	4.94	4.25 to 5.75	-440	70 to 130	4.09	20	
AX24412	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.0981	0.100	0.104	0.085 to 0.115	98.1	70 to 130	2.20	20	
AX24412	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0905	0.0932	0.0874	0.085 to 0.115	90.5	70 to 130	2.94	20	
AX24412	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0876	0.0892	0.0980	0.085 to 0.115	87.6	70 to 130	1.78	20	
AX24412	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0883	0.0900	0.0953	0.085 to 0.115	88.3	70 to 130	1.88	20	
AX24412	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.101	0.105	0.104	0.085 to 0.115	99.5	70 to 130	3.97	20	
AX24412	Boron, Total	mg/L	-0.00143	0.044	1.00	1.07	1.08	0.978	0.85 to 1.15	102	70 to 130	0.938	20	
AX24412	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.101	0.103	0.101	0.085 to 0.115	101	70 to 130	2.14	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
 Recovery for Calcium is out of range. The spike amount is less than 30% of the sample amount. SGC 12/7/17

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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24412

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX24412	Solids, Dissolved	mg/L	5.00	25				3180	52.0	40 to 60			1.11	5

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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
 Recovery for Calcium is out of range. The spike amount is less than 30% of the sample amount. SGC 12/7/17

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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24413

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	0.0115	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	J 0.0608	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	258	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	0.0632	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	0.0687	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			125	2550	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	1		0.60	2.00	J 0.83	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1		0.032	0.10	0.36	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	60		84.0	300	1400	mg/L

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 FAX (205) 257-1654

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24413

Sample	Analysis	Units	MB	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AX24418	Barium, Total	mg/L	0.0000437	0.0044	0.10	0.0996	0.0943	0.0994	0.085 to 0.115	99.6	70 to 130	5.39	20	
AX24418	Boron, Total	mg/L	-0.00150	0.044	1.00	1.06	1.09	0.985	0.85 to 1.15	106	70 to 130	3.23	20	
AX24418	Mercury, Total by CVAA	mg/L	-0.0000102	0.0005	0.004	0.00378	0.00378	0.00383	0.0034 to 0.0046	94.5	70 to 130	0.0608	20	
AX24418	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.102	0.0950	0.104	0.085 to 0.115	102	70 to 130	6.84	20	
AX24418	Lithium, Total	mg/L	-0.0000234	0.022	0.20	0.215	0.223	0.196	0.17 to 0.23	107	70 to 130	3.85	20	
AX24418	Cobalt, Total	mg/L	0.000002	0.0044	0.10	0.105	0.0976	0.102	0.085 to 0.115	105	70 to 130	7.02	20	
AX24418	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.103	0.0962	0.104	0.085 to 0.115	103	70 to 130	6.66	20	
AX24418	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.108	0.102	0.107	0.085 to 0.115	108	70 to 130	5.36	20	
AX24418	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0971	0.0899	0.0998	0.085 to 0.115	97.1	70 to 130	7.66	20	
AX24418	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0906	0.0848	0.0953	0.085 to 0.115	90.6	70 to 130	6.67	20	
AX24418	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0905	0.0986	0.0907	0.085 to 0.115	90.5	70 to 130	8.60	20	
AX24418	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0952	0.0897	0.0980	0.085 to 0.115	95.2	70 to 130	5.98	20	
AX24418	Calcium, Total	mg/L	-0.0111	0.22	5.00	5.27	5.47	4.92	4.25 to 5.75	105	70 to 130	3.75	20	
AX24418	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0850	0.0913	0.0874	0.085 to 0.115	85.0	70 to 130	7.16	20	
AX24418	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.103	0.0967	0.101	0.085 to 0.115	103	70 to 130	6.05	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24413

Sample	Analysis	Units	MB	MB Limit	Spike	LFM	Sample Duplicate	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60			0.589	5

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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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24414

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5			0.0010	0.005	J	0.00327	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01		0.0133	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2			0.02	0.1	J	0.0486	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10			1.0	5.0		310	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5			0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01	J	0.00919	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1			0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2			0.010	0.05	J	0.0176	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5			0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5			0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5			0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1				125		2330	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	1			0.60	2.00		3.9	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1			0.032	0.10		0.18	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	60			84.0	300		1200	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24414

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24418	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.0996	0.0943	0.0994	0.085 to 0.115		99.6	70 to 130	5.39	20
AX24418	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.108	0.102	0.107	0.085 to 0.115		108	70 to 130	5.36	20
AX24418	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0971	0.0899	0.0998	0.085 to 0.115		97.1	70 to 130	7.66	20
AX24418	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0906	0.0848	0.0953	0.085 to 0.115		90.6	70 to 130	6.67	20
AX24418	Cobalt, Total	mg/L	0.000002	0.0044	0.10	0.105	0.0976	0.102	0.085 to 0.115		105	70 to 130	7.02	20
AX24418	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.103	0.0962	0.104	0.085 to 0.115		103	70 to 130	6.66	20
AX24418	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0905	0.0986	0.0907	0.085 to 0.115		90.5	70 to 130	8.60	20
AX24418	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0952	0.0897	0.0980	0.085 to 0.115		95.2	70 to 130	5.98	20
AX24418	Boron, Total	mg/L	-0.00150	0.044	1.00	1.06	1.09	0.985	0.85 to 1.15		106	70 to 130	3.23	20
AX24418	Mercury, Total by CVAA	mg/L	-0.0000102	0.0005	0.004	0.00378	0.00378	0.00383	0.0034 to 0.0046		94.5	70 to 130	0.0608	20
AX24418	Calcium, Total	mg/L	-0.0111	0.22	5.00	5.27	5.47	4.92	4.25 to 5.75		105	70 to 130	3.75	20
AX24418	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0850	0.0913	0.0874	0.085 to 0.115		85.0	70 to 130	7.16	20
AX24418	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.103	0.0967	0.101	0.085 to 0.115		103	70 to 130	6.05	20
AX24418	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.102	0.0950	0.104	0.085 to 0.115		102	70 to 130	6.84	20
AX24418	Lithium, Total	mg/L	-0.0000234	0.022	0.20	0.215	0.223	0.196	0.17 to 0.23		107	70 to 130	3.85	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24414

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60	0.589	5

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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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24415

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/19/2017	EPA 200.7		2	0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7		2	0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E		1	0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E		1	1.40	5.00	U <1.4	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24415

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24418	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.0996	0.0943	0.0994	0.085 to 0.115		99.6	70 to 130	5.39	20
AX24418	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.102	0.0950	0.104	0.085 to 0.115		102	70 to 130	6.84	20
AX24418	Lithium, Total	mg/L	-0.0000234	0.022	0.20	0.215	0.223	0.196	0.17 to 0.23		107	70 to 130	3.85	20
AX24418	Calcium, Total	mg/L	-0.0111	0.22	5.00	5.27	5.47	4.92	4.25 to 5.75		105	70 to 130	3.75	20
AX24418	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0850	0.0913	0.0874	0.085 to 0.115		85.0	70 to 130	7.16	20
AX24418	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.103	0.0967	0.101	0.085 to 0.115		103	70 to 130	6.05	20
AX24418	Boron, Total	mg/L	-0.00150	0.044	1.00	1.06	1.09	0.985	0.85 to 1.15		106	70 to 130	3.23	20
AX24418	Mercury, Total by CVAA	mg/L	-0.0000102	0.0005	0.004	0.00378	0.00378	0.00383	0.0034 to 0.0046		94.5	70 to 130	0.0608	20
AX24418	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0905	0.0986	0.0907	0.085 to 0.115		90.5	70 to 130	8.60	20
AX24418	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0952	0.0897	0.0980	0.085 to 0.115		95.2	70 to 130	5.98	20
AX24418	Cobalt, Total	mg/L	0.000002	0.0044	0.10	0.105	0.0976	0.102	0.085 to 0.115		105	70 to 130	7.02	20
AX24418	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.103	0.0962	0.104	0.085 to 0.115		103	70 to 130	6.66	20
AX24418	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.108	0.102	0.107	0.085 to 0.115		108	70 to 130	5.36	20
AX24418	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0971	0.0899	0.0998	0.085 to 0.115		97.1	70 to 130	7.66	20
AX24418	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0906	0.0848	0.0953	0.085 to 0.115		90.6	70 to 130	6.67	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24415

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60		0.589 5

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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
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 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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24416

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/23/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01	J	0.00993	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7			2	0.02	0.1	J	0.0373	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7			10	1.0	5.0		381	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01		0.150	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7			2	0.010	0.05		0.0900	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/23/2017	SM 2540C			1		250		3770	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E			1	0.60	2.00		2.4	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C			1	0.032	0.10		0.35	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E			60	84.0	300		2000	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24416

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	
			MB	Limit					Limit	Rec	Limit	Prec		
AX24418	Barium, Total	mg/L	0.0000437	0.0044	0.10	0.0996	0.0943	0.0994	0.085 to 0.115		99.6	70 to 130	5.39	20
AX24418	Boron, Total	mg/L	-0.00150	0.044	1.00	1.06	1.09	0.985	0.85 to 1.15		106	70 to 130	3.23	20
AX24418	Mercury, Total by CVAA	mg/L	-0.0000102	0.0005	0.004	0.00378	0.00378	0.00383	0.0034 to 0.0046		94.5	70 to 130	0.0608	20
AX24418	Cobalt, Total	mg/L	0.000002	0.0044	0.10	0.105	0.0976	0.102	0.085 to 0.115		105	70 to 130	7.02	20
AX24418	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.103	0.0962	0.104	0.085 to 0.115		103	70 to 130	6.66	20
AX24418	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.108	0.102	0.107	0.085 to 0.115		108	70 to 130	5.36	20
AX24418	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0971	0.0899	0.0998	0.085 to 0.115		97.1	70 to 130	7.66	20
AX24418	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0906	0.0848	0.0953	0.085 to 0.115		90.6	70 to 130	6.67	20
AX24418	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0905	0.0986	0.0907	0.085 to 0.115		90.5	70 to 130	8.60	20
AX24418	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0952	0.0897	0.0980	0.085 to 0.115		95.2	70 to 130	5.98	20
AX24418	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.102	0.0950	0.104	0.085 to 0.115		102	70 to 130	6.84	20
AX24418	Lithium, Total	mg/L	-0.0000234	0.022	0.20	0.215	0.223	0.196	0.17 to 0.23		107	70 to 130	3.85	20
AX24418	Calcium, Total	mg/L	-0.0111	0.22	5.00	5.27	5.47	4.92	4.25 to 5.75		105	70 to 130	3.75	20
AX24418	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0850	0.0913	0.0874	0.085 to 0.115		85.0	70 to 130	7.16	20
AX24418	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.103	0.0967	0.101	0.085 to 0.115		103	70 to 130	6.05	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24416

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec
				Limit				Duplicate	LFB	Limit	Prec
AX24236	Solids, Dissolved	mg/L	5.00	25				2560	52.0	40 to 60	0.589
											5

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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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24417

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	0.0156	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	0.111	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	347	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	0.278	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			250	2670	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	1		0.60	2.00	4.9	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1		0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	60		84.0	300	1400	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24417

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24418	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.0996	0.0943	0.0994	0.085 to 0.115		99.6	70 to 130	5.39	20
AX24418	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.102	0.0950	0.104	0.085 to 0.115		102	70 to 130	6.84	20
AX24418	Lithium, Total	mg/L	-0.0000234	0.022	0.20	0.215	0.223	0.196	0.17 to 0.23		107	70 to 130	3.85	20
AX24418	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.108	0.102	0.107	0.085 to 0.115		108	70 to 130	5.36	20
AX24418	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0971	0.0899	0.0998	0.085 to 0.115		97.1	70 to 130	7.66	20
AX24418	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0906	0.0848	0.0953	0.085 to 0.115		90.6	70 to 130	6.67	20
AX24418	Calcium, Total	mg/L	-0.0111	0.22	5.00	5.27	5.47	4.92	4.25 to 5.75		105	70 to 130	3.75	20
AX24418	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0850	0.0913	0.0874	0.085 to 0.115		85.0	70 to 130	7.16	20
AX24418	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.103	0.0967	0.101	0.085 to 0.115		103	70 to 130	6.05	20
AX24418	Boron, Total	mg/L	-0.00150	0.044	1.00	1.06	1.09	0.985	0.85 to 1.15		106	70 to 130	3.23	20
AX24418	Mercury, Total by CVAA	mg/L	-0.0000102	0.0005	0.004	0.00378	0.00378	0.00383	0.0034 to 0.0046		94.5	70 to 130	0.0608	20
AX24418	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0905	0.0986	0.0907	0.085 to 0.115		90.5	70 to 130	8.60	20
AX24418	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0952	0.0897	0.0980	0.085 to 0.115		95.2	70 to 130	5.98	20
AX24418	Cobalt, Total	mg/L	0.000002	0.0044	0.10	0.105	0.0976	0.102	0.085 to 0.115		105	70 to 130	7.02	20
AX24418	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.103	0.0962	0.104	0.085 to 0.115		103	70 to 130	6.66	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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24417

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60	0.589	5

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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: WMWGORLFEB
 Sample Date: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24418

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/19/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/19/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/23/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/19/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/23/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/23/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/23/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/7/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/7/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/7/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	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: WMWGORLFEB
 Sample Date: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24418

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24418	Barium, Total	mg/L	0.00000437	0.0044	0.10	0.0996	0.0943	0.0994	0.085 to 0.115		99.6	70 to 130	5.39	20
AX24418	Arsenic, Total	mg/L	0.0000140	0.0022	0.10	0.102	0.0950	0.104	0.085 to 0.115		102	70 to 130	6.84	20
AX24418	Lithium, Total	mg/L	-0.0000234	0.022	0.20	0.215	0.223	0.196	0.17 to 0.23		107	70 to 130	3.85	20
AX24418	Antimony, Total	mg/L	0.0000500	0.00132	0.10	0.0905	0.0986	0.0907	0.085 to 0.115		90.5	70 to 130	8.60	20
AX24418	Cadmium, Total	mg/L	0.00000552	0.00066	0.10	0.0952	0.0897	0.0980	0.085 to 0.115		95.2	70 to 130	5.98	20
AX24418	Beryllium, Total	mg/L	0.0000143	0.00132	0.10	0.108	0.102	0.107	0.085 to 0.115		108	70 to 130	5.36	20
AX24418	Chromium, Total	mg/L	0.00000825	0.0044	0.10	0.0971	0.0899	0.0998	0.085 to 0.115		97.1	70 to 130	7.66	20
AX24418	Selenium, Total	mg/L	0.000137	0.0044	0.10	0.0906	0.0848	0.0953	0.085 to 0.115		90.6	70 to 130	6.67	20
AX24418	Cobalt, Total	mg/L	0.000002	0.0044	0.10	0.105	0.0976	0.102	0.085 to 0.115		105	70 to 130	7.02	20
AX24418	Lead, Total	mg/L	0.0000137	0.0022	0.10	0.103	0.0962	0.104	0.085 to 0.115		103	70 to 130	6.66	20
AX24418	Boron, Total	mg/L	-0.00150	0.044	1.00	1.06	1.09	0.985	0.85 to 1.15		106	70 to 130	3.23	20
AX24418	Mercury, Total by CVAA	mg/L	-0.0000102	0.0005	0.004	0.00378	0.00378	0.00383	0.0034 to 0.0046		94.5	70 to 130	0.0608	20
AX24418	Calcium, Total	mg/L	-0.0111	0.22	5.00	5.27	5.47	4.92	4.25 to 5.75		105	70 to 130	3.75	20
AX24418	Molybdenum, Total	mg/L	0.00000905	0.0044	0.10	0.0850	0.0913	0.0874	0.085 to 0.115		85.0	70 to 130	7.16	20
AX24418	Thallium, Total	mg/L	0.0000130	0.00044	0.10	0.103	0.0967	0.101	0.085 to 0.115		103	70 to 130	6.05	20

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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: 16-Oct-17
 Customer ID:
 Delivery Date: 17-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24418

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	
				Limit				Duplicate	LFB	Limit	Rec	Limit	Prec
AX24236	Solids, Dissolved	mg/L	5.00	25				2560	52.0	40 to 60			0.589 5

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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:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 10/16/2017 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="Anthony Goggins"/>	Location	<input type="text" value="Gorgas Landfill"/>
Analysis Requested	<input type="text" value="Bottle 1 (500mL): Metals, Bottle 2 (250mL): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions"/>		
Comments	<input type="text" value="All anions outsourced to Test America, Pensacola Groundwater Samples secured in APCO Shipping Lab located in GSC Building 8. Secured samples at 1600 on 16NOV17. Samples received from secured APCO Shipping Lab."/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	10/16/2017	08:25	4	Groundwater		AX24403
MW-6	10/16/2017	09:37	4	Groundwater		AX24404
MW-7	10/16/2017	10:44	4	Groundwater		AX24405
MW-8	10/16/2017	11:51	4	Groundwater		AX24406
MW-18	10/16/2017	12:57	4	Groundwater		AX24407
MW-7DUP	10/16/2017	10:44	4	Sample Duplicate		AX24408
FB-1	10/16/2017	13:13	4	Field Blank		AX24409

Relinquished By	Received By	Date/Time
 <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=XZ8TROTH@southernco.com, c=US Date: 2017.10.16.16:10:58 -0500</small>	 <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkorne@southernco.com, c=US Date: 2017.10.17.15:11:24 -0500</small>	10/16/2017 14:17
Benjamin Rothschadl	Keith Kornegay	10/17/2017 15:11

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="3901-20009-2-1"/>	Cooler Temp <input type="text" value="0.5 degrees C"/>
	Thermometer ID <input type="text" value="6035-30997-2-2"/>
	pH Strip ID <input type="text" value="6153-32040-10-7"/>



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/16/2017 17:00

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): Metals, Bottle 2 (250mL): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions

Comments All anions outsourced to Test America, Pensacola
Groundwater Samples secured in APCO Shipping Lab located in GSC Building 8. Secured samples at 1600 on 16NOV17.
Samples received from secured APCO Shipping Lab.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-19	10/16/2017	10:30	4	Groundwater		AX24416
MW-20	10/16/2017	13:27	4	Groundwater		AX24417
EB-1	10/16/2017	10:50	4	Equipment Blank		AX24418

Relinquished By	Received By	Date/Time
		10/16/2017 14:22
Benjamin Rothschadl <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=K2BTR0TH@southernco.com, c=US Date: 2017.10.16.16:10:06 -0500</small>	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkkorne@southernco.com, c=US Date: 2017.10.17.15:07:13 -0500</small>	10/17/2017 15:07

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	
Cooler Temp	0.5 degrees C	
Thermometer ID	6035-30997-2-2	
pH Strip ID	6153-32040-10-7	



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/16/2017 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 (500mL): TDS, Bottle 4 (250mL): Anions		
Comments	All anions outsourced to Test America, Pensacola Groundwater Samples secured in APCO Shipping Lab located in GSC Building 8. Secured samples at 1600 on 16NOV17. Samples received from secured APCO Shipping Lab.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/16/2017	10:35	4	Groundwater		AX24410
MW-13 DUP	10/16/2017	10:35	4	Sample Duplicate		AX24411
MW-14	10/16/2017	11:49	4	Groundwater		AX24412
MW-15	10/16/2017	12:45	4	Groundwater		AX24413
MW-16	10/16/2017	13:50	4	Groundwater		AX24414
FB-2	10/16/2017	14:10	4	Field Blank		AX24415

Relinquished By	Received By	Date/Time
Benjamin Rothschadl <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=X287R0TH@southernco.com, c=US Date: 2017.10.16 16:07:35 -0500</small>	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=rikornegay@southernco.com, c=US Date: 2017.10.17 14:44:05 -0500</small>	10/17/2017 14:44

SmarTroll ID	5151-26193-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	3901-20010-2-2		
	Cooler Temp		0.5 degrees C
	Thermometer ID		6035-30997-2-2
	pH Strip ID	6153-32040-10-7	

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: 400-144723-8

TestAmerica SDG: Plant Gorgas CCB Landfills

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:

11/3/2017 9:43:18 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-144723-8
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-8

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-8

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 374155 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits. RPD Limit is 4, RPD value is 17.

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX24406 MW-8 (400-144723-116). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373750 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: AX24403 MW-5 (400-144723-113), AX24404 MW-6 (400-144723-114), AX24405 MW-7 (400-144723-115), AX24406 MW-8 (400-144723-116), AX24407 MW-18 (400-144723-117), AX24408 MW-7 DUP (400-144723-118), AX24410 MW-13 (400-144723-120), AX24410 MW-13 (400-144723-120[MS]), AX24410 MW-13 (400-144723-120[MSD]), AX24411 MW-13 DUP (400-144723-121), AX24412 MW-14 (400-144723-122), AX24413 MW-15 (400-144723-123), (400-144723-A-53 MS), (400-144723-A-53 MSD), AX24414 MW-16 (400-144723-124), AX24416 MW-19 (400-144723-126), AX24417 MW-20 (400-144723-127), AX24417 MW-20 (400-144723-127[MS]) and AX24417 MW-20 (400-144723-127[MSD]). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Closing CCV (13.95) and CCB (-.7005) did not transfer properly to TALS but is reflected in the raw data attached to 373750.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373759 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: 400-144723-8
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24403 MW-5

Lab Sample ID: 400-144723-113

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.36		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24404 MW-6

Lab Sample ID: 400-144723-114

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
Fluoride	0.14		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1900		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24405 MW-7

Lab Sample ID: 400-144723-115

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		2.0	0.60	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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24406 MW-8

Lab Sample ID: 400-144723-116

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	140		20	6.0	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24407 MW-18

Lab Sample ID: 400-144723-117

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.0	J	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	1900		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24408 MW-7 DUP

Lab Sample ID: 400-144723-118

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		2.0	0.60	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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24409 FB-1

Lab Sample ID: 400-144723-119

No Detections.

Client Sample ID: AX24410 MW-13

Lab Sample ID: 400-144723-120

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5	J	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	1800	F1	300	84	mg/L	60		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: 400-144723-8
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24411 MW-13 DUP

Lab Sample ID: 400-144723-121

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5	J	2.0	0.60	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	1700		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24412 MW-14

Lab Sample ID: 400-144723-122

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3	J	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24413 MW-15

Lab Sample ID: 400-144723-123

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	0.83	J	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.36		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24414 MW-16

Lab Sample ID: 400-144723-124

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		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	1200		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24415 FB-2

Lab Sample ID: 400-144723-125

No Detections.

Client Sample ID: AX24416 MW-19

Lab Sample ID: 400-144723-126

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4		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	2000		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24417 MW-20

Lab Sample ID: 400-144723-127

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.9		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	1400	F1	300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24418 EB-1

Lab Sample ID: 400-144723-128

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: 400-144723-8
SDG: Plant Gorgas CCB Landfills

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



Sample Summary

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

TestAmerica Job ID: 400-144723-8
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-113	AX24403 MW-5	Water	10/16/17 08:25	10/19/17 09:37
400-144723-114	AX24404 MW-6	Water	10/16/17 09:37	10/19/17 09:37
400-144723-115	AX24405 MW-7	Water	10/16/17 10:44	10/19/17 09:37
400-144723-116	AX24406 MW-8	Water	10/16/17 11:51	10/19/17 09:37
400-144723-117	AX24407 MW-18	Water	10/16/17 12:57	10/19/17 09:37
400-144723-118	AX24408 MW-7 DUP	Water	10/16/17 10:44	10/19/17 09:37
400-144723-119	AX24409 FB-1	Water	10/16/17 13:13	10/19/17 09:37
400-144723-120	AX24410 MW-13	Water	10/16/17 10:35	10/19/17 09:37
400-144723-121	AX24411 MW-13 DUP	Water	10/16/17 10:35	10/19/17 09:37
400-144723-122	AX24412 MW-14	Water	10/16/17 11:49	10/19/17 09:37
400-144723-123	AX24413 MW-15	Water	10/16/17 12:45	10/19/17 09:37
400-144723-124	AX24414 MW-16	Water	10/16/17 13:50	10/19/17 09:37
400-144723-125	AX24415 FB-2	Water	10/16/17 14:10	10/19/17 09:37
400-144723-126	AX24416 MW-19	Water	10/16/17 10:30	10/19/17 09:37
400-144723-127	AX24417 MW-20	Water	10/16/17 13:27	10/19/17 09:37
400-144723-128	AX24418 EB-1	Water	10/16/17 10:50	10/19/17 09:37

Client Sample Results

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24403 MW-5

Lab Sample ID: 400-144723-113

Date Collected: 10/16/17 08:25

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.1		2.0	0.60	mg/L			10/28/17 10:58	1
Fluoride	0.36		0.10	0.032	mg/L			10/31/17 15:36	1
Sulfate	2300		380	110	mg/L			10/28/17 14:50	75

Client Sample ID: AX24404 MW-6

Lab Sample ID: 400-144723-114

Date Collected: 10/16/17 09:37

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/28/17 10:58	1
Fluoride	0.14		0.10	0.032	mg/L			10/31/17 15:38	1
Sulfate	1900		300	84	mg/L			10/28/17 14:21	60

Client Sample ID: AX24405 MW-7

Lab Sample ID: 400-144723-115

Date Collected: 10/16/17 10:44

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		2.0	0.60	mg/L			10/28/17 11:00	1
Fluoride	0.20		0.10	0.032	mg/L			10/31/17 15:40	1
Sulfate	1300		300	84	mg/L			10/28/17 14:21	60

Client Sample ID: AX24406 MW-8

Lab Sample ID: 400-144723-116

Date Collected: 10/16/17 11:51

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		20	6.0	mg/L			10/28/17 11:39	10
Fluoride	0.22		0.10	0.032	mg/L			10/31/17 15:43	1
Sulfate	1400		300	84	mg/L			10/28/17 14:21	60

Client Sample ID: AX24407 MW-18

Lab Sample ID: 400-144723-117

Date Collected: 10/16/17 12:57

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	J	2.0	0.60	mg/L			10/28/17 11:00	1
Fluoride	0.31		0.10	0.032	mg/L			10/31/17 15:56	1
Sulfate	1900		300	84	mg/L			10/28/17 14:25	60

Client Sample Results

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24408 MW-7 DUP

Lab Sample ID: 400-144723-118

Date Collected: 10/16/17 10:44

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		2.0	0.60	mg/L			10/28/17 11:00	1
Fluoride	0.21		0.10	0.032	mg/L			10/31/17 15:58	1
Sulfate	1300		300	84	mg/L			10/28/17 14:25	60

Client Sample ID: AX24409 FB-1

Lab Sample ID: 400-144723-119

Date Collected: 10/16/17 13:13

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/28/17 11:07	1
Fluoride	<0.032		0.10	0.032	mg/L			10/31/17 16:02	1
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 14:43	1

Client Sample ID: AX24410 MW-13

Lab Sample ID: 400-144723-120

Date Collected: 10/16/17 10:35

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5	J	2.0	0.60	mg/L			10/28/17 11:07	1
Fluoride	0.22		0.10	0.032	mg/L			11/01/17 08:02	1
Sulfate	1800	F1	300	84	mg/L			10/28/17 14:25	60

Client Sample ID: AX24411 MW-13 DUP

Lab Sample ID: 400-144723-121

Date Collected: 10/16/17 10:35

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5	J	2.0	0.60	mg/L			10/28/17 11:07	1
Fluoride	0.21		0.10	0.032	mg/L			10/31/17 16:04	1
Sulfate	1700		300	84	mg/L			10/28/17 14:29	60

Client Sample ID: AX24412 MW-14

Lab Sample ID: 400-144723-122

Date Collected: 10/16/17 11:49

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3	J	2.0	0.60	mg/L			10/28/17 11:07	1
Fluoride	0.25		0.10	0.032	mg/L			10/31/17 16:06	1
Sulfate	1800		300	84	mg/L			10/28/17 14:29	60

Client Sample ID: AX24413 MW-15

Lab Sample ID: 400-144723-123

Date Collected: 10/16/17 12:45

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.83	J	2.0	0.60	mg/L			10/28/17 11:07	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24413 MW-15

Lab Sample ID: 400-144723-123

Date Collected: 10/16/17 12:45

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.36		0.10	0.032	mg/L			11/01/17 07:42	1
Sulfate	1400		300	84	mg/L			10/28/17 14:29	60

Client Sample ID: AX24414 MW-16

Lab Sample ID: 400-144723-124

Date Collected: 10/16/17 13:50

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.9		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	0.18		0.10	0.032	mg/L			11/01/17 07:43	1
Sulfate	1200		300	84	mg/L			10/28/17 15:54	60

Client Sample ID: AX24415 FB-2

Lab Sample ID: 400-144723-125

Date Collected: 10/16/17 14:10

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	<0.032		0.10	0.032	mg/L			11/01/17 07:46	1
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 16:24	1

Client Sample ID: AX24416 MW-19

Lab Sample ID: 400-144723-126

Date Collected: 10/16/17 10:30

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.4		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	0.35		0.10	0.032	mg/L			11/01/17 07:48	1
Sulfate	2000		300	84	mg/L			10/28/17 15:54	60

Client Sample ID: AX24417 MW-20

Lab Sample ID: 400-144723-127

Date Collected: 10/16/17 13:27

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.9		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	0.13		0.10	0.032	mg/L			11/02/17 07:26	1
Sulfate	1400	F1	300	84	mg/L			10/28/17 15:55	60

Client Sample ID: AX24418 EB-1

Lab Sample ID: 400-144723-128

Date Collected: 10/16/17 10:50

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	<0.032		0.10	0.032	mg/L			11/01/17 07:51	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144723-8
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24418 EB-1

Lab Sample ID: 400-144723-128

Date Collected: 10/16/17 10:50

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 16:24	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
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- 9
- 10
- 11
- 12
- 13
- 14

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-8
SDG: Plant Gorgas CCB Landfills

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

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: 400-144723-8
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24403 MW-5

Lab Sample ID: 400-144723-113

Date Collected: 10/16/17 08:25

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	373750	10/28/17 14:50	JLB	TAL PEN

Client Sample ID: AX24404 MW-6

Lab Sample ID: 400-144723-114

Date Collected: 10/16/17 09:37

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 10:58	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:38	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:21	JLB	TAL PEN

Client Sample ID: AX24405 MW-7

Lab Sample ID: 400-144723-115

Date Collected: 10/16/17 10:44

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 11:00	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:40	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:21	JLB	TAL PEN

Client Sample ID: AX24406 MW-8

Lab Sample ID: 400-144723-116

Date Collected: 10/16/17 11:51

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		10	373713	10/28/17 11:39	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:21	JLB	TAL PEN

Client Sample ID: AX24407 MW-18

Lab Sample ID: 400-144723-117

Date Collected: 10/16/17 12:57

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 11:00	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:56	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:25	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-8
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24408 MW-7 DUP

Lab Sample ID: 400-144723-118

Date Collected: 10/16/17 10:44

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 11:00	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 15:58	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:25	JLB	TAL PEN

Client Sample ID: AX24409 FB-1

Lab Sample ID: 400-144723-119

Date Collected: 10/16/17 13:13

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 11:07	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 16:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373750	10/28/17 14:43	JLB	TAL PEN

Client Sample ID: AX24410 MW-13

Lab Sample ID: 400-144723-120

Date Collected: 10/16/17 10:35

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 11:07	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 08:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:25	JLB	TAL PEN

Client Sample ID: AX24411 MW-13 DUP

Lab Sample ID: 400-144723-121

Date Collected: 10/16/17 10:35

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 11:07	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 16:04	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:29	JLB	TAL PEN

Client Sample ID: AX24412 MW-14

Lab Sample ID: 400-144723-122

Date Collected: 10/16/17 11:49

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 11:07	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374155	10/31/17 16:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:29	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24413 MW-15

Lab Sample ID: 400-144723-123

Date Collected: 10/16/17 12:45

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	373713	10/28/17 11:07	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 07:42	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373750	10/28/17 14:29	JLB	TAL PEN

Client Sample ID: AX24414 MW-16

Lab Sample ID: 400-144723-124

Date Collected: 10/16/17 13:50

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 07:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 15:54	JLB	TAL PEN

Client Sample ID: AX24415 FB-2

Lab Sample ID: 400-144723-125

Date Collected: 10/16/17 14:10

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 07:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373759	10/28/17 16:24	JLB	TAL PEN

Client Sample ID: AX24416 MW-19

Lab Sample ID: 400-144723-126

Date Collected: 10/16/17 10:30

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 07:48	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 15:54	JLB	TAL PEN

Client Sample ID: AX24417 MW-20

Lab Sample ID: 400-144723-127

Date Collected: 10/16/17 13:27

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374351	11/02/17 07:26	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 15:55	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-8
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24418 EB-1

Lab Sample ID: 400-144723-128

Date Collected: 10/16/17 10:50

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 07:51	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373759	10/28/17 16:24	JLB	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: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

General Chemistry

Analysis Batch: 373713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-113	AX24403 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-144723-114	AX24404 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144723-115	AX24405 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-144723-116	AX24406 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-144723-117	AX24407 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-144723-118	AX24408 MW-7 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144723-119	AX24409 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-144723-120	AX24410 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-144723-121	AX24411 MW-13 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144723-122	AX24412 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-144723-123	AX24413 MW-15	Total/NA	Water	SM 4500 Cl- E	
MB 400-373713/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-373713/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-373713/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144723-120 MS	AX24410 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-144723-120 MSD	AX24410 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-144723-A-95 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-144723-A-95 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 373750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-113	AX24403 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-144723-114	AX24404 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144723-115	AX24405 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-144723-116	AX24406 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-144723-117	AX24407 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-144723-118	AX24408 MW-7 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144723-119	AX24409 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-144723-120	AX24410 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-144723-121	AX24411 MW-13 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144723-122	AX24412 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-144723-123	AX24413 MW-15	Total/NA	Water	SM 4500 SO4 E	
MB 400-373750/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-373750/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-373750/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144723-120 MS	AX24410 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-144723-120 MSD	AX24410 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-144723-A-53 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-144723-A-53 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 373759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-124	AX24414 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-144723-125	AX24415 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-144723-126	AX24416 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-144723-127	AX24417 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144723-128	AX24418 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-373759/5	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-373759/6	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-373759/9	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144723-127 MS	AX24417 MW-20	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: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 373759 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-127 MSD	AX24417 MW-20	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 374016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-124	AX24414 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-144723-125	AX24415 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-144723-126	AX24416 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144723-127	AX24417 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144723-128	AX24418 EB-1	Total/NA	Water	SM 4500 Cl- E	
MB 400-374016/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-374016/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-374016/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144723-124 MS	AX24414 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-144723-124 MSD	AX24414 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-144723-127 MS	AX24417 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144723-127 MSD	AX24417 MW-20	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 374155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-113	AX24403 MW-5	Total/NA	Water	SM 4500 F C	
400-144723-114	AX24404 MW-6	Total/NA	Water	SM 4500 F C	
400-144723-115	AX24405 MW-7	Total/NA	Water	SM 4500 F C	
400-144723-116	AX24406 MW-8	Total/NA	Water	SM 4500 F C	
400-144723-117	AX24407 MW-18	Total/NA	Water	SM 4500 F C	
400-144723-118	AX24408 MW-7 DUP	Total/NA	Water	SM 4500 F C	
400-144723-119	AX24409 FB-1	Total/NA	Water	SM 4500 F C	
400-144723-121	AX24411 MW-13 DUP	Total/NA	Water	SM 4500 F C	
400-144723-122	AX24412 MW-14	Total/NA	Water	SM 4500 F C	
MB 400-374155/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374155/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144723-A-50 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144723-A-50 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-144723-A-82 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144723-A-82 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-120	AX24410 MW-13	Total/NA	Water	SM 4500 F C	
400-144723-123	AX24413 MW-15	Total/NA	Water	SM 4500 F C	
400-144723-124	AX24414 MW-16	Total/NA	Water	SM 4500 F C	
400-144723-125	AX24415 FB-2	Total/NA	Water	SM 4500 F C	
400-144723-126	AX24416 MW-19	Total/NA	Water	SM 4500 F C	
400-144723-128	AX24418 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-374206/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374206/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144723-120 MS	AX24410 MW-13	Total/NA	Water	SM 4500 F C	
400-144723-120 MSD	AX24410 MW-13	Total/NA	Water	SM 4500 F C	
400-144723-A-95 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144723-A-95 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

QC Association Summary

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

TestAmerica Job ID: 400-144723-8
SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 374351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-127	AX24417 MW-20	Total/NA	Water	SM 4500 F C	
MB 400-374351/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374351/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144723-127 MS	AX24417 MW-20	Total/NA	Water	SM 4500 F C	
400-144723-127 MSD	AX24417 MW-20	Total/NA	Water	SM 4500 F C	
660-83448-C-7 DU	Duplicate	Total/NA	Water	SM 4500 F C	

- 1
- 2
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- 13
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QC Sample Results

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-373713/6
Matrix: Water
Analysis Batch: 373713

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			10/28/17 10:42	1

Lab Sample ID: LCS 400-373713/7
Matrix: Water
Analysis Batch: 373713

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 400-373713/3
Matrix: Water
Analysis Batch: 373713

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	1.46	J	mg/L		73	50 - 150

Lab Sample ID: 400-144723-120 MS
Matrix: Water
Analysis Batch: 373713

Client Sample ID: AX24410 MW-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.5	J	10.0	12.8		mg/L		113	73 - 120

Lab Sample ID: 400-144723-120 MSD
Matrix: Water
Analysis Batch: 373713

Client Sample ID: AX24410 MW-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	1.5	J	10.0	12.6		mg/L		111	73 - 120	2	8

Lab Sample ID: 400-144723-A-95 MS
Matrix: Water
Analysis Batch: 373713

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	4.8		10.0	15.5		mg/L		107	73 - 120

Lab Sample ID: 400-144723-A-95 MSD
Matrix: Water
Analysis Batch: 373713

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	4.8		10.0	16.6		mg/L		118	73 - 120	7	8

Lab Sample ID: MB 400-374016/6
Matrix: Water
Analysis Batch: 374016

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			10/31/17 07:53	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: LCS 400-374016/7
Matrix: Water
Analysis Batch: 374016

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	30.4		mg/L		101	90 - 110

Lab Sample ID: MRL 400-374016/3
Matrix: Water
Analysis Batch: 374016

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	1.98	J	mg/L		99	50 - 150

Lab Sample ID: 400-144723-124 MS
Matrix: Water
Analysis Batch: 374016

Client Sample ID: AX24414 MW-16
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.9		10.0	15.8		mg/L		119	73 - 120

Lab Sample ID: 400-144723-124 MSD
Matrix: Water
Analysis Batch: 374016

Client Sample ID: AX24414 MW-16
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.9		10.0	15.1		mg/L		112	73 - 120	5	8

Lab Sample ID: 400-144723-127 MS
Matrix: Water
Analysis Batch: 374016

Client Sample ID: AX24417 MW-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.9		10.0	15.9		mg/L		109	73 - 120

Lab Sample ID: 400-144723-127 MSD
Matrix: Water
Analysis Batch: 374016

Client Sample ID: AX24417 MW-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.9		10.0	15.3		mg/L		104	73 - 120	3	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-374155/3
Matrix: Water
Analysis Batch: 374155

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			10/31/17 15:15	1

QC Sample Results

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 400-374155/4
Matrix: Water
Analysis Batch: 374155

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: 400-144723-A-50 MS
Matrix: Water
Analysis Batch: 374155

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
Fluoride	0.14	F2	1.00	1.12		mg/L		98	75 - 125

Lab Sample ID: 400-144723-A-50 MSD
Matrix: Water
Analysis Batch: 374155

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
Fluoride	0.14	F2	1.00	0.940	F2	mg/L		80	75 - 125	17	4

Lab Sample ID: 400-144723-A-82 MS
Matrix: Water
Analysis Batch: 374155

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
Fluoride	0.14		1.00	1.10		mg/L		96	75 - 125

Lab Sample ID: 400-144723-A-82 MSD
Matrix: Water
Analysis Batch: 374155

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
Fluoride	0.14		1.00	1.10		mg/L		96	75 - 125	0	4

Lab Sample ID: MB 400-374206/3
Matrix: Water
Analysis Batch: 374206

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			11/01/17 07:27	1

Lab Sample ID: LCS 400-374206/4
Matrix: Water
Analysis Batch: 374206

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: 400-144723-120 MS
Matrix: Water
Analysis Batch: 374206

Client Sample ID: AX24410 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	1.17		mg/L		95	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144723-120 MSD
Matrix: Water
Analysis Batch: 374206

Client Sample ID: AX24410 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	1.17		mg/L		95	75 - 125	0	4

Lab Sample ID: 400-144723-A-95 MS
Matrix: Water
Analysis Batch: 374206

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
Fluoride	0.14		1.00	1.12		mg/L		98	75 - 125		

Lab Sample ID: 400-144723-A-95 MSD
Matrix: Water
Analysis Batch: 374206

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
Fluoride	0.14		1.00	1.10		mg/L		96	75 - 125	2	4

Lab Sample ID: MB 400-374351/3
Matrix: Water
Analysis Batch: 374351

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			11/02/17 07:18	1

Lab Sample ID: LCS 400-374351/4
Matrix: Water
Analysis Batch: 374351

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	4.00	3.75		mg/L		94	90 - 110		

Lab Sample ID: 400-144723-127 MS
Matrix: Water
Analysis Batch: 374351

Client Sample ID: AX24417 MW-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.13		1.00	1.12		mg/L		99	75 - 125		

Lab Sample ID: 400-144723-127 MSD
Matrix: Water
Analysis Batch: 374351

Client Sample ID: AX24417 MW-20
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	1.12		mg/L		99	75 - 125	0	4

Lab Sample ID: 660-83448-C-7 DU
Matrix: Water
Analysis Batch: 374351

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.20		0.200		mg/L		0	4

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-373750/6
Matrix: Water
Analysis Batch: 373750

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			10/28/17 14:06	1

Lab Sample ID: LCS 400-373750/7
Matrix: Water
Analysis Batch: 373750

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	13.5		mg/L		90	90 - 110

Lab Sample ID: MRL 400-373750/3
Matrix: Water
Analysis Batch: 373750

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	3.67	J	mg/L		73	50 - 150

Lab Sample ID: 400-144723-120 MS
Matrix: Water
Analysis Batch: 373750

Client Sample ID: AX24410 MW-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1800	F1	600	1670	F1	mg/L		-16	77 - 128

Lab Sample ID: 400-144723-120 MSD
Matrix: Water
Analysis Batch: 373750

Client Sample ID: AX24410 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	1800	F1	600	1670	F1	mg/L		-15	77 - 128	0	5

Lab Sample ID: 400-144723-A-53 MS
Matrix: Water
Analysis Batch: 373750

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	1800	F1	600	1820	F1	mg/L		7	77 - 128

Lab Sample ID: 400-144723-A-53 MSD
Matrix: Water
Analysis Batch: 373750

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	1800	F1	600	1730	F1	mg/L		-7	77 - 128	5	5

Lab Sample ID: MB 400-373759/5
Matrix: Water
Analysis Batch: 373759

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			10/28/17 15:32	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: LCS 400-373759/6
Matrix: Water
Analysis Batch: 373759

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	13.8		mg/L		92	90 - 110

Lab Sample ID: MRL 400-373759/9
Matrix: Water
Analysis Batch: 373759

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	4.00	J	mg/L		80	50 - 150

Lab Sample ID: 400-144723-127 MS
Matrix: Water
Analysis Batch: 373759

Client Sample ID: AX24417 MW-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1400	F1	600	1380	F1	mg/L		-9	77 - 128

Lab Sample ID: 400-144723-127 MSD
Matrix: Water
Analysis Batch: 373759

Client Sample ID: AX24417 MW-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1400	F1	600	1360	F1	mg/L		-14	77 - 128	2	5

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Chain of Custody Record

Client Information		Sampler: Anthony Goggins/Ben Rothschild		Lab Piv: Whitmire, Cheyenne R		Carrier Tracking No(s): 400-56525-24537.1		COC No: 400-56525-24537.1	
Client Contact: Keith Kornegay		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1		Job #:	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		City: Calera		State, Zip: AL, 35040		Phone: 205-684-6004	
PO #:		WO #:		Project #: 40007143		SSOW#:		Site: Gorgas Landfill	
Due Date Requested: 11/2/2017		TAT Requested (days): Routine		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Matrix (Metals, Semimetals, Organohal, Organophos, Acid)		Preservation Code:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		SM 4500 F.C	
SM 4500 SQ. E		SM 4500 C.E		SM 4500 F.C		SM 4500 F.C		SM 4500 SQ. E	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (Metals, Semimetals, Organohal, Organophos, Acid)	
AX24403	10/16/17	0825	G	Water	X	X	X	X	MW-5
AX24404	10/16/17	0937	G	Water	X	X	X	X	MW-6
AX24405	10/16/17	1044	G	Water	X	X	X	X	MW-7
AX24406	10/16/17	1151	G	Water	X	X	X	X	MW-8
AX24407	10/16/17	1257	G	Water	X	X	X	X	MW-18
AX24408	10/16/17	1044	G	Water	X	X	X	X	MW-7DUP (Sample Duplicate)
AX24409	10/16/17	1313	G	Water	X	X	X	X	FB-1 (Field Blank)
AX24410	10/16/17	1035	G	Water	Y	X	X	X	MW-13
Possible Hazard Identification		Date: 10/18/17 12:00		Company: APC		Time:		Method of Shipment:	
<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		Date/Time:		Company:		Date/Time:		Date/Time:	
Deliverable Requested: I, II, III, IV, Other (specify)		Date/Time:		Company:		Date/Time:		Date/Time:	
Empty Kit Relinquished by: Relinquished by: Keith Kornegay		Date/Time:		Company:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Date/Time:		Date/Time:	
Custody, Seals Intact: Custody Seal No.:		Date/Time:		Company:		Date/Time:		Date/Time:	
Special Instructions/Note:		Special Instructions/QC Requirements:		Special Instructions/QC Requirements:		Special Instructions/QC Requirements:		Special Instructions/QC Requirements:	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab		Archive For		Months	
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For		0.00		7/18		7/18		7/18	



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-8
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

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	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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 <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: 400-144723-8
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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



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: 400-144723-7

TestAmerica SDG: Plant Gorgas CCB Landfills

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:

11/20/2017 3:34:09 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@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: 400-144723-7
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-7

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-7

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-333881. The following samples were reduced due to limited volume: AX24384 MW-5 (400-144723-97), AX24385 MW-6 (400-144723-98), AX24385 MW-6 (400-144723-98[MS]), AX24385 MW-6 (400-144723-98[MSD]), AX24386 MW-7 (400-144723-99), AX24387 MW-8 (400-144723-100), AX24388 MW-18 (400-144723-101), AX24389 MW-7 DUP (400-144723-102), AX24390 FB-1 (400-144723-103), AX24391 MW-13 (400-144723-104), AX24392 MW-13 DUP (400-144723-105), AX24393 MW-14 (400-144723-106), AX24394 MW-15 (400-144723-107), AX24395 MW-16 (400-144723-108), AX24396 FB-2 (400-144723-109), AX24397 MW-19 (400-144723-110), AX24398 MW-20 (400-144723-111) and AX24399 EB-1 (400-144723-112).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-333880. The following samples were reduced due to limited volume: AX24384 MW-5 (400-144723-97), AX24385 MW-6 (400-144723-98), AX24385 MW-6 (400-144723-98[MS]), AX24385 MW-6 (400-144723-98[MSD]), AX24386 MW-7 (400-144723-99), AX24387 MW-8 (400-144723-100), AX24388 MW-18 (400-144723-101), AX24389 MW-7 DUP (400-144723-102), AX24390 FB-1 (400-144723-103), AX24391 MW-13 (400-144723-104), AX24392 MW-13 DUP (400-144723-105), AX24393 MW-14 (400-144723-106), AX24394 MW-15 (400-144723-107), AX24395 MW-16 (400-144723-108), AX24396 FB-2 (400-144723-109), AX24397 MW-19 (400-144723-110), AX24398 MW-20 (400-144723-111) and AX24399 EB-1 (400-144723-112).

Method Summary

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

TestAmerica Job ID: 400-144723-7
SDG: Plant Gorgas CCB Landfills

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: 400-144723-7
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-97	AX24384 MW-5	Water	10/16/17 08:25	10/19/17 09:37
400-144723-98	AX24385 MW-6	Water	10/16/17 09:37	10/19/17 09:37
400-144723-99	AX24386 MW-7	Water	10/16/17 10:44	10/19/17 09:37
400-144723-100	AX24387 MW-8	Water	10/16/17 11:51	10/19/17 09:37
400-144723-101	AX24388 MW-18	Water	10/16/17 12:57	10/19/17 09:37
400-144723-102	AX24389 MW-7 DUP	Water	10/16/17 10:44	10/19/17 09:37
400-144723-103	AX24390 FB-1	Water	10/16/17 13:13	10/19/17 09:37
400-144723-104	AX24391 MW-13	Water	10/16/17 10:35	10/19/17 09:37
400-144723-105	AX24392 MW-13 DUP	Water	10/16/17 10:35	10/19/17 09:37
400-144723-106	AX24393 MW-14	Water	10/16/17 11:49	10/19/17 09:37
400-144723-107	AX24394 MW-15	Water	10/16/17 12:45	10/19/17 09:37
400-144723-108	AX24395 MW-16	Water	10/16/17 13:50	10/19/17 09:37
400-144723-109	AX24396 FB-2	Water	10/16/17 14:10	10/19/17 09:37
400-144723-110	AX24397 MW-19	Water	10/16/17 10:30	10/19/17 09:37
400-144723-111	AX24398 MW-20	Water	10/16/17 13:27	10/19/17 09:37
400-144723-112	AX24399 EB-1	Water	10/16/17 10:50	10/19/17 09:37

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24384 MW-5

Lab Sample ID: 400-144723-97

Date Collected: 10/16/17 08:25

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.125	U	0.0916	0.0923	1.00	0.127	pCi/L	10/25/17 09:41	11/16/17 16:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					10/25/17 09:41	11/16/17 16:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.439	U	0.446	0.448	1.00	0.727	pCi/L	10/25/17 10:02	11/02/17 16:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					10/25/17 10:02	11/02/17 16:52	1
Y Carrier	71.0		40 - 110					10/25/17 10:02	11/02/17 16:52	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	0.564	U	0.455	0.457	5.00	0.727	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24385 MW-6

Lab Sample ID: 400-144723-98

Date Collected: 10/16/17 09:37

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.303		0.114	0.117	1.00	0.106	pCi/L	10/25/17 09:41	11/16/17 14:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 09:41	11/16/17 14:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.26		0.401	0.418	1.00	0.533	pCi/L	10/25/17 10:02	11/02/17 16:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 10:02	11/02/17 16:52	1
Y Carrier	81.1		40 - 110					10/25/17 10:02	11/02/17 16:52	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	1.57		0.417	0.434	5.00	0.533	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24386 MW-7

Lab Sample ID: 400-144723-99

Date Collected: 10/16/17 10:44

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.228		0.107	0.109	1.00	0.119	pCi/L	10/25/17 09:41	11/16/17 14:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/25/17 09:41	11/16/17 14:08	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	0.335	0.336	1.00	0.547	pCi/L	10/25/17 10:02	11/02/17 16:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/25/17 10:02	11/02/17 16:52	1
Y Carrier	78.1		40 - 110					10/25/17 10:02	11/02/17 16:52	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	0.550		0.352	0.353	5.00	0.547	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24387 MW-8

Lab Sample ID: 400-144723-100

Date Collected: 10/16/17 11:51

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0973	U	0.0819	0.0823	1.00	0.119	pCi/L	10/25/17 09:41	11/16/17 16:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 09:41	11/16/17 16:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.426	U	0.308	0.310	1.00	0.479	pCi/L	10/25/17 10:02	11/02/17 16:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 10:02	11/02/17 16:52	1
Y Carrier	82.6		40 - 110					10/25/17 10:02	11/02/17 16:52	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	0.524		0.319	0.321	5.00	0.479	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24388 MW-18

Lab Sample ID: 400-144723-101

Date Collected: 10/16/17 12:57

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.000884	U	0.0556	0.0556	1.00	0.118	pCi/L	10/25/17 09:41	11/16/17 16:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					10/25/17 09:41	11/16/17 16:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.266	U	0.290	0.291	1.00	0.474	pCi/L	10/25/17 10:02	11/02/17 16:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					10/25/17 10:02	11/02/17 16:52	1
Y Carrier	77.4		40 - 110					10/25/17 10:02	11/02/17 16:52	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	0.267	U	0.295	0.296	5.00	0.474	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24389 MW-7 DUP

Lab Sample ID: 400-144723-102

Date Collected: 10/16/17 10:44

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142		0.0854	0.0864	1.00	0.105	pCi/L	10/25/17 09:41	11/16/17 16:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 09:41	11/16/17 16:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.215	U	0.306	0.307	1.00	0.513	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	79.3		40 - 110					10/25/17 10:02	11/02/17 16:53	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	0.357	U	0.318	0.319	5.00	0.513	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24390 FB-1

Lab Sample ID: 400-144723-103

Date Collected: 10/16/17 13:13

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0525	U	0.0648	0.0650	1.00	0.106	pCi/L	10/25/17 09:41	11/16/17 16:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					10/25/17 09:41	11/16/17 16:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.109	U	0.277	0.277	1.00	0.478	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	79.6		40 - 110					10/25/17 10:02	11/02/17 16:53	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	0.162	U	0.284	0.285	5.00	0.478	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24391 MW-13

Lab Sample ID: 400-144723-104

Date Collected: 10/16/17 10:35

Matrix: Water

Date Received: 10/19/17 09:37

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	U	0.0924	0.0930	1.00	0.134	pCi/L	10/25/17 09:41	11/16/17 16:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 09:41	11/16/17 16:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.522		0.295	0.298	1.00	0.438	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	82.6		40 - 110					10/25/17 10:02	11/02/17 16:53	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	0.641		0.309	0.312	5.00	0.438	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24392 MW-13 DUP

Lab Sample ID: 400-144723-105

Date Collected: 10/16/17 10:35

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.159		0.0827	0.0839	1.00	0.0913	pCi/L	10/25/17 09:41	11/16/17 16:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 09:41	11/16/17 16:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.271	U	0.302	0.303	1.00	0.495	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	76.6		40 - 110					10/25/17 10:02	11/02/17 16:53	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	0.429	U	0.313	0.314	5.00	0.495	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24393 MW-14

Lab Sample ID: 400-144723-106

Date Collected: 10/16/17 11:49

Matrix: Water

Date Received: 10/19/17 09:37

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		0.0854	0.0864	1.00	0.107	pCi/L	10/25/17 09:41	11/16/17 16:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 09:41	11/16/17 16:23	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.609		0.330	0.335	1.00	0.490	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	77.4		40 - 110					10/25/17 10:02	11/02/17 16:53	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	0.755		0.341	0.346	5.00	0.490	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24394 MW-15

Lab Sample ID: 400-144723-107

Date Collected: 10/16/17 12:45

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.170		0.0887	0.0900	1.00	0.102	pCi/L	10/25/17 09:41	11/16/17 16:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 09:41	11/16/17 16:23	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.270	U	0.317	0.318	1.00	0.523	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	78.5		40 - 110					10/25/17 10:02	11/02/17 16:53	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	0.441	U	0.329	0.330	5.00	0.523	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24395 MW-16

Lab Sample ID: 400-144723-108

Date Collected: 10/16/17 13:50

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.176		0.0889	0.0903	1.00	0.101	pCi/L	10/25/17 09:41	11/16/17 16:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 09:41	11/16/17 16:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.382	U	0.342	0.344	1.00	0.551	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	82.2		40 - 110					10/25/17 10:02	11/02/17 16:53	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	0.558		0.353	0.356	5.00	0.551	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24396 FB-2

Lab Sample ID: 400-144723-109

Date Collected: 10/16/17 14:10

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0431	U	0.0570	0.0572	1.00	0.0953	pCi/L	10/25/17 09:41	11/16/17 16:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					10/25/17 09:41	11/16/17 16:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0458	U	0.303	0.303	1.00	0.549	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	75.5		40 - 110					10/25/17 10:02	11/02/17 16:53	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	-0.00269	U	0.308	0.308	5.00	0.549	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24397 MW-19

Lab Sample ID: 400-144723-110

Date Collected: 10/16/17 10:30

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.278		0.105	0.108	1.00	0.100	pCi/L	10/25/17 09:41	11/16/17 16:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/25/17 09:41	11/16/17 16:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.322	U	0.304	0.306	1.00	0.491	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	80.0		40 - 110					10/25/17 10:02	11/02/17 16:53	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	0.600		0.322	0.324	5.00	0.491	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24398 MW-20

Lab Sample ID: 400-144723-111

Date Collected: 10/16/17 13:27

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.310		0.104	0.107	1.00	0.0724	pCi/L	10/25/17 09:41	11/16/17 16:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/25/17 09:41	11/16/17 16:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.619		0.329	0.334	1.00	0.492	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	83.4		40 - 110					10/25/17 10:02	11/02/17 16:53	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	0.929		0.345	0.351	5.00	0.492	pCi/L		11/20/17 14:21	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24399 EB-1

Lab Sample ID: 400-144723-112

Date Collected: 10/16/17 10:50

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0475	U	0.0502	0.0504	1.00	0.0764	pCi/L	10/25/17 09:41	11/16/17 16:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					10/25/17 09:41	11/16/17 16:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0972	U	0.260	0.260	1.00	0.487	pCi/L	10/25/17 10:02	11/02/17 16:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					10/25/17 10:02	11/02/17 16:53	1
Y Carrier	78.1		40 - 110					10/25/17 10:02	11/02/17 16:53	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	-0.0497	U	0.265	0.265	5.00	0.487	pCi/L		11/20/17 14:21	1

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-7
SDG: Plant Gorgas CCB Landfills

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: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24384 MW-5

Lab Sample ID: 400-144723-97

Date Collected: 10/16/17 08:25

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337449	11/16/17 16:08	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:52	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24385 MW-6

Lab Sample ID: 400-144723-98

Date Collected: 10/16/17 09:37

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337449	11/16/17 14:08	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:52	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24386 MW-7

Lab Sample ID: 400-144723-99

Date Collected: 10/16/17 10:44

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337449	11/16/17 14:08	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:52	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24387 MW-8

Lab Sample ID: 400-144723-100

Date Collected: 10/16/17 11:51

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337449	11/16/17 16:08	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:52	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-7
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24388 MW-18

Lab Sample ID: 400-144723-101

Date Collected: 10/16/17 12:57

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337449	11/16/17 16:08	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:52	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24389 MW-7 DUP

Lab Sample ID: 400-144723-102

Date Collected: 10/16/17 10:44

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337449	11/16/17 16:08	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24390 FB-1

Lab Sample ID: 400-144723-103

Date Collected: 10/16/17 13:13

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337449	11/16/17 16:08	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24391 MW-13

Lab Sample ID: 400-144723-104

Date Collected: 10/16/17 10:35

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337449	11/16/17 16:08	CDR	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-7
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24392 MW-13 DUP

Lab Sample ID: 400-144723-105

Date Collected: 10/16/17 10:35

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337446	11/16/17 16:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24393 MW-14

Lab Sample ID: 400-144723-106

Date Collected: 10/16/17 11:49

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337446	11/16/17 16:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24394 MW-15

Lab Sample ID: 400-144723-107

Date Collected: 10/16/17 12:45

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337446	11/16/17 16:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24395 MW-16

Lab Sample ID: 400-144723-108

Date Collected: 10/16/17 13:50

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 16:25	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24396 FB-2

Lab Sample ID: 400-144723-109

Date Collected: 10/16/17 14:10

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 16:25	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24397 MW-19

Lab Sample ID: 400-144723-110

Date Collected: 10/16/17 10:30

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 16:25	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24398 MW-20

Lab Sample ID: 400-144723-111

Date Collected: 10/16/17 13:27

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337552	11/16/17 16:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	TAL SL

Client Sample ID: AX24399 EB-1

Lab Sample ID: 400-144723-112

Date Collected: 10/16/17 10:50

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333880	10/25/17 09:41	LDE	TAL SL
Total/NA	Analysis	9315		1	337552	11/16/17 16:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333881	10/25/17 10:02	LDE	TAL SL
Total/NA	Analysis	9320		1	335318	11/02/17 16:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338140	11/20/17 14:21	EAW	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: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Rad

Prep Batch: 333880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-97	AX24384 MW-5	Total/NA	Water	PrecSep-21	
400-144723-98	AX24385 MW-6	Total/NA	Water	PrecSep-21	
400-144723-99	AX24386 MW-7	Total/NA	Water	PrecSep-21	
400-144723-100	AX24387 MW-8	Total/NA	Water	PrecSep-21	
400-144723-101	AX24388 MW-18	Total/NA	Water	PrecSep-21	
400-144723-102	AX24389 MW-7 DUP	Total/NA	Water	PrecSep-21	
400-144723-103	AX24390 FB-1	Total/NA	Water	PrecSep-21	
400-144723-104	AX24391 MW-13	Total/NA	Water	PrecSep-21	
400-144723-105	AX24392 MW-13 DUP	Total/NA	Water	PrecSep-21	
400-144723-106	AX24393 MW-14	Total/NA	Water	PrecSep-21	
400-144723-107	AX24394 MW-15	Total/NA	Water	PrecSep-21	
400-144723-108	AX24395 MW-16	Total/NA	Water	PrecSep-21	
400-144723-109	AX24396 FB-2	Total/NA	Water	PrecSep-21	
400-144723-110	AX24397 MW-19	Total/NA	Water	PrecSep-21	
400-144723-111	AX24398 MW-20	Total/NA	Water	PrecSep-21	
400-144723-112	AX24399 EB-1	Total/NA	Water	PrecSep-21	
MB 160-333880/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-333880/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-144723-98 MS	AX24385 MW-6	Total/NA	Water	PrecSep-21	
400-144723-98 MSD	AX24385 MW-6	Total/NA	Water	PrecSep-21	

Prep Batch: 333881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-97	AX24384 MW-5	Total/NA	Water	PrecSep_0	
400-144723-98	AX24385 MW-6	Total/NA	Water	PrecSep_0	
400-144723-99	AX24386 MW-7	Total/NA	Water	PrecSep_0	
400-144723-100	AX24387 MW-8	Total/NA	Water	PrecSep_0	
400-144723-101	AX24388 MW-18	Total/NA	Water	PrecSep_0	
400-144723-102	AX24389 MW-7 DUP	Total/NA	Water	PrecSep_0	
400-144723-103	AX24390 FB-1	Total/NA	Water	PrecSep_0	
400-144723-104	AX24391 MW-13	Total/NA	Water	PrecSep_0	
400-144723-105	AX24392 MW-13 DUP	Total/NA	Water	PrecSep_0	
400-144723-106	AX24393 MW-14	Total/NA	Water	PrecSep_0	
400-144723-107	AX24394 MW-15	Total/NA	Water	PrecSep_0	
400-144723-108	AX24395 MW-16	Total/NA	Water	PrecSep_0	
400-144723-109	AX24396 FB-2	Total/NA	Water	PrecSep_0	
400-144723-110	AX24397 MW-19	Total/NA	Water	PrecSep_0	
400-144723-111	AX24398 MW-20	Total/NA	Water	PrecSep_0	
400-144723-112	AX24399 EB-1	Total/NA	Water	PrecSep_0	
MB 160-333881/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-333881/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-144723-98 MS	AX24385 MW-6	Total/NA	Water	PrecSep_0	
400-144723-98 MSD	AX24385 MW-6	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-333880/1-A
Matrix: Water
Analysis Batch: 337449

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333880

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07217	U	0.0819	0.0822	1.00	0.132	pCi/L	10/25/17 09:41	11/16/17 14:08	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/25/17 09:41	11/16/17 14:08	1

Lab Sample ID: LCS 160-333880/2-A
Matrix: Water
Analysis Batch: 337449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333880

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.7	15.96		1.62	1.00	0.108	pCi/L	101	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	105		40 - 110						

Lab Sample ID: 400-144723-98 MS
Matrix: Water
Analysis Batch: 337449

Client Sample ID: AX24385 MW-6
Prep Type: Total/NA
Prep Batch: 333880

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.303		15.8	16.39		1.65	1.00	0.113	pCi/L	102	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	105		40 - 110								

Lab Sample ID: 400-144723-98 MSD
Matrix: Water
Analysis Batch: 337449

Client Sample ID: AX24385 MW-6
Prep Type: Total/NA
Prep Batch: 333880

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.303		15.7	16.11		1.64	1.00	0.115	pCi/L	101	75 - 138	0.08	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	104		40 - 110										

QC Sample Results

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

TestAmerica Job ID: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-333881/1-A
Matrix: Water
Analysis Batch: 335318

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333881

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7181		0.371	0.376	1.00	0.551	pCi/L	10/25/17 10:02	11/02/17 16:52	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	10/25/17 10:02	11/02/17 16:52	1
Y Carrier	78.5		40 - 110	10/25/17 10:02	11/02/17 16:52	1

Lab Sample ID: LCS 160-333881/2-A
Matrix: Water
Analysis Batch: 335318

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333881

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	11.8	10.54		1.26	1.00	0.434	pCi/L	89	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	105		40 - 110
Y Carrier	78.1		40 - 110

Lab Sample ID: 400-144723-98 MS
Matrix: Water
Analysis Batch: 335318

Client Sample ID: AX24385 MW-6
Prep Type: Total/NA
Prep Batch: 333881

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	1.26		11.8	10.84		1.30	1.00	0.508	pCi/L	81	45 - 150

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	105		40 - 110
Y Carrier	76.6		40 - 110

Lab Sample ID: 400-144723-98 MSD
Matrix: Water
Analysis Batch: 335318

Client Sample ID: AX24385 MW-6
Prep Type: Total/NA
Prep Batch: 333881

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	1.26		11.8	10.84		1.31	1.00	0.472	pCi/L	81	45 - 150	0	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	78.1		40 - 110

Chain of Custody Record

Client Information		Sampler: Anthony Goggins/Ben Roitschadi		Lab Fax: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-56525-24537.1	
Client Contact: Keith Komegay		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1		Job #:	
Company: Alabama Power General Test Laboratory		Due Date Requested: 11/10/2017		Analysis Requested		Preservation Codes:		Special Instructions/Note:	
Address: 744 County Rd 87 GSC #8		TAT Requested (days):		Matrix (Water, Solid, or Water/Air)		A - HCL		M - Hexane	
City: Calera		PO #:		Sample Type (C=comp, G=grab)		B - NaOH		N - None	
State/Zip: AL, 35040		WO #:		Sample Time		C - Zn Acetate		O - AsNaO2	
Phone: 205-664-6004		Project #:		Sample Date		D - Nitric Acid		P - Na2O4S	
Email: fkkomegay@southernco.com		SSOW#:		Preservation Code:		E - NaHSO4		Q - Na2SO3	
Project Name: Gorgas Landfill		Field Filtered Sample (Yes or No)		Matrix		F - MeOH		R - Na2S2O3	
CCR		Perform MS/MSD (Yes or No)		Sample (Water, Solid, or Water/Air)		G - Amchlor		S - H2SO4	
Site: Gorgas Landfill		8315_Ra226, 9320_Ra226, Ra226Ra228_GFPc		Sample Date		H - Ascorbic Acid		T - TSP Dodecahydrate	
Sample Identification		Field Filtered Sample (Yes or No)		Sample Time		I - Ice		U - Acetone	
AX24384	10/16/17	0825	X	G	Water	J - DI Water		V - MCAA	
AX24385	10/16/17	0937	Y	G	Water	K - EDTA		W - ph 4-5	
AX24386	10/16/17	1044	X	G	Water	L - EDA		Z - other (specify)	
AX24387	10/16/17	1151	X	G	Water	Other:			
AX24388	10/16/17	1257	X	G	Water				
AX24389	10/16/17	1044	X	G	Water				
AX24390	10/16/17	1313	X	G	Water				
AX24391	10/16/17	1035	X	G	Water				
Possible Hazard Identification		Field Filtered Sample (Yes or No)		Sample Time					
<input type="checkbox"/> Non-Hazard		8315_Ra226, 9320_Ra226, Ra226Ra228_GFPc		Sample Date					
<input type="checkbox"/> Flammable		D		Preservation Code:					
<input type="checkbox"/> Skin Irritant		X		Sample (Water, Solid, or Water/Air)					
<input type="checkbox"/> Poison B		X		Sample Date					
<input type="checkbox"/> Unknown		X		Sample Time					
<input type="checkbox"/> Radiological		X		Sample Date					
Deliverable Requested: I, II, III, IV, Other (specify)		Perform MS/MSD (Yes or No)		Sample Time					
Empty Kit Relinquished by:		8315_Ra226, 9320_Ra226, Ra226Ra228_GFPc		Sample Date					
Relinquished by: Keith Komegay		D		Sample Time					
Relinquished by:		X		Sample Date					
Relinquished by:		X		Sample Time					
Custody Seals Intact: Δ Yes Δ No		X		Sample Date					
Custody Seal No.:		X		Sample Time					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		X		Sample Date					
<input type="checkbox"/> Return To Client		X		Sample Time					
<input type="checkbox"/> Disposal By Lab		X		Sample Date					
Special Instructions/QC Requirements:		X		Sample Time					
Archive For _____ Months		X		Sample Date					
Method of Shipment:		X		Sample Time					
Received by:		X		Sample Date					
Received by:		X		Sample Time					
Received by:		X		Sample Date					
Cooler Temperature(s) °C and Other Parameters:		X		Sample Time					
RASS 18.3°C		X		Sample Date					
Date/Time: 10/19/17 09:37		X		Sample Time					
Date/Time:		X		Sample Date					
Date/Time:		X		Sample Time					



Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):					
Sampler: Ben Roltschadi/Nick Plitts		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-56525-24537.1					
Phone: Keith Komegay		Company: Alabama Power General Test Laboratory		Page: Page 1 of 1					
Address: 744 County Rd 87 GSC #8		City: Calera		Job #:					
State, Zip: AL, 35040		PO #:		Preservation Codes:					
Phone: 205-664-6004		WO #:		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:					
Email: fkkomeg@southernco.com		Project #: 40007143		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)					
CCR		Site: Gorgias Landfill		Special Instructions/Note:					
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Overhead, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note:
AX24392	10/16/17	1035	G	Water	X	X	1	MW-13 DUP (Sample Duplicate)	
AX24393	10/16/17	1149	G	Water	X	X	1	MW-14	
AX24394	10/16/17	1245	G	Water	X	X	1	MW-15	
AX24395	10/16/17	1350	G	Water	X	X	1	MW-16	
AX24396	10/16/17	1410	G	Water	X	X	1	FB-2 (Field Blank)	
AX24397	10/16/17	1030	G	Water	X	X	1	MW-19	
AX24398	10/16/17	1327	G	Water	X	X	1	MW-20	
AX24399	10/16/17	1050	G	Water	X	X	1	EB-1 (Equipment Blank)	
<p>Possible Hazard Identification <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) _____</p> <p>Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____</p> <p>Relinquished by: Keith Komegay Date/Time: 10/18/2017 12:00 Company: APC Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Custody Seals Intact: _____ Custody Seal No.: _____ Δ Yes Δ No</p>									
<p>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: _____</p>									



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-7
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

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	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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 <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: 400-144723-7
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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

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
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	11-30-17 *
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	12-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	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: 400-144723-7
SDG: Plant Gorgas CCB Landfills

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	02-21-18
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



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/16/2017 16:00

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 (1L): Radiological
Comments	Radium Duplicate collected at MW-6. No temperature preservation requirement Groundwater Samples secured in APCO Shipping Lab located in GSC Building 8. Secured samples at 1600 on 16NOV17. Samples received from secured APCO Shipping Lab.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	10/16/2017	08:25	1	Groundwater		AX24384
MW-6	10/16/2017	09:37	3	Groundwater		AX24385
MW-7	10/16/2017	10:44	1	Groundwater		AX24386
MW-8	10/16/2017	11:51	1	Groundwater		AX24387
MW-18	10/16/2017	12:57	1	Groundwater		AX24388
MW-7DUP	10/16/2017	10:44	1	Sample Duplicate		AX24389
FB-1	10/16/2017	13:13	1	Field Blank		AX24390

Relinquished By	Received By	Date/Time
 <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=X28TROTH@southernco.com, c=US Date: 2017.10.16.16:12:52 -0500</small>	 <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.10.17.15:17:18 -0500</small>	10/16/2017 14:15
Benjamin Rothschadl	Keith Kornegay	10/17/2017 15:17

SmarTroll ID	5141-26150-1-1	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
		6153-32040-10-7



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

Field Complete
 Lab Complete

Lab ETA 10/16/2017 17:00

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 (1L): Radiological
Comments	No temperature preservation requirement. Groundwater Samples secured in APCO Shipping Lab located in GSC Building 8. Secured samples at 1600 on 16NOV17. Samples received from secured APCO Shipping Lab.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-19	10/16/2017	10:30	1	Groundwater		AX24397
MW-20	10/16/2017	13:27	1	Groundwater		AX24398
EB-1	10/16/2017	10:50	1	Equipment Blank		AX24399

Relinquished By	Received By	Date/Time
 <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=X28TROTH@southernco.com, c=US Date: 2017.10.16 16:09:20 -0500</small>	 <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegas@southernco.com, c=US Date: 2017.10.17 15:01:22 -0500</small>	10/16/2017 14:26
Benjamin Rothschadl	Keith Kornegay	10/17/2017 15:01

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	Cooler Temp
		Thermometer ID
		pH Strip ID
		NA
		NA
		6153-32040-10-7



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

- Field Complete
- Lab Complete

Lab ETA 10/16/2017 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	No temperature preservation requirement. Groundwater Samples secured in APCO Shipping Lab located in GSC Building 8. Secured samples at 1600 on 16NOV17. Samples received from secured APCO Shipping Lab.		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/16/2017	10:35	1	Groundwater		AX24391
MW-13 DUP	10/16/2017	10:35	1	Sample Duplicate		AX24392
MW-14	10/16/2017	11:49	1	Groundwater		AX24393
MW-15	10/16/2017	12:45	1	Groundwater		AX24394
MW-16	10/16/2017	13:50	1	Groundwater		AX24395
FB-2	10/16/2017	14:10	1	Field Blank		AX24396

Relinquished By	Received By	Date/Time
Benjamin Rothschadl <small>Digitally signed by Benjamin Rothschadl DN: cn=Benjamin Rothschadl, o=Groundwater, ou=APCO Environmental Affairs, email=x287ROTH@southernco.com, c=US Date: 2017.10.16 16:08:32 -0500</small>	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=frkornega@southernco.com, c=US Date: 2017.10.17 14:58:49 -0500</small>	10/17/2017 14:58

SmarTroll ID	5151-26193-1-1	All metals and radiological bottles have pH < 2	<input checked="" type="checkbox"/>
Turbidity ID	3901-20010-2-2	Cooler Temp	NA
		Thermometer ID	NA
		pH Strip ID	6153-32040-10-7

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

 Alabama Power



Sample Group : WMWGORLF_1125

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:

Supervision:



Anions

Gorgas Landfill

WMWGORLF_1125

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 anions were outsourced to Test America, Pensacola for analysis. Below is the case narrative provided by Test America.

Job Narrative
400-144723-10
General Chemistry

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX24480 MW-8 (400-144723-148). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373759 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: AX24477 MW-5 (400-144723-145), AX24478 MW-6 (400-144723-146), AX24479 MW-7 (400-144723-147), AX24480 MW-8 (400-144723-148), AX24481 MW-18 (400-144723-149), AX24482 MW-7 DUP (400-144723-150), AX24484 MW-13 (400-144723-152), (400-144723-A-127), (400-144723-A-127 MS), (400-144723-A-127 MSD), AX24485 MW-14 (400-144723-153), AX24486 MW-14 DUP (400-144723-154), AX24487 MW-15 (400-144723-155), AX24488 FB-1 (400-144723-156), AX24489 MW-19 (400-144723-157), AX24490 MW-20 (400-144723-158), AX24491 EB-1 (400-144723-159) and AX24492 MW-16 (400-144723-160). 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 374149 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.



Metals ICP

Gorgas Landfill

WMWGORLF_1125

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>
AX24477	20171020BK	WMWGORLF_1125
AX24478	20171020BK	WMWGORLF_1125
AX24479	20171020BK	WMWGORLF_1125
AX24480	20171020BK	WMWGORLF_1125
AX24481	20171020BK	WMWGORLF_1125
AX24482	20171020BK	WMWGORLF_1125
AX24483	20171020BK	WMWGORLF_1125
AX24484	20171020BK	WMWGORLF_1125
AX24485	20171020BK	WMWGORLF_1125
AX24486	20171020BK	WMWGORLF_1125
AX24487	20171020CK	WMWGORLF_1125
AX24488	20171020CK	WMWGORLF_1125
AX24489	20171020CK	WMWGORLF_1125
AX24490	20171020CK	WMWGORLF_1125
AX24491	20171020CK	WMWGORLF_1125
AX24492	20171020CK	WMWGORLF_1125

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

General Quality Control Procedures:

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



- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- An additional Rinse was added between samples for monitoring Lithium due to possible matrix issues.
- 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	AX24486
Calcium	AX24492

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 dilution to compensate for matrix effects. The following samples were further 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>
AX24477	Calcium	x10
AX24478	Calcium	x100
AX24479	Calcium	x10
AX24480	Calcium	x10

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Calera, AL 35040
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Case Narrative



AX24481	Calcium	x10
AX24482	Calcium	x10
AX24484	Calcium	x10
AX24485	Calcium	x10
AX24486	Calcium	x10
AX24486MS	Calcium	x10
AX24486MSD	Calcium	x10
AX24487	Calcium	x10
AX24489	Calcium	x10
AX24490	Calcium	x10
AX24492	Calcium	x10
AX24492MS	Calcium	x10
AX24492MSD	Calcium	x10

8. The raw data results include results corrected for dilution.



Metals ICPMS

Gorgas Landfill

WMWGORLF_1125

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>
AX24477	604836	WMWGORLF_1125
AX24478	604836	WMWGORLF_1125
AX24479	604836	WMWGORLF_1125
AX24480	604836	WMWGORLF_1125
AX24481	604836	WMWGORLF_1125
AX24482	604836	WMWGORLF_1125
AX24483	604836	WMWGORLF_1125
AX24484	604836	WMWGORLF_1125
AX24485	604836	WMWGORLF_1125
AX24486	604836	WMWGORLF_1125
AX24487	604837	WMWGORLF_1125
AX24488	604837	WMWGORLF_1125
AX24489	604837	WMWGORLF_1125
AX24490	604837	WMWGORLF_1125
AX24491	604837	WMWGORLF_1125
AX24492	604837	WMWGORLF_1125

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_1125

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>
AX24477	605059	WMWGORLF_1125
AX24478	605059	WMWGORLF_1125
AX24479	605059	WMWGORLF_1125
AX24480	605059	WMWGORLF_1125
AX24481	605059	WMWGORLF_1125
AX24482	605059	WMWGORLF_1125
AX24483	605059	WMWGORLF_1125
AX24484	605059	WMWGORLF_1125
AX24485	605059	WMWGORLF_1125
AX24486	605059	WMWGORLF_1125
AX24487	605020	WMWGORLF_1125
AX24488	605020	WMWGORLF_1125
AX24489	605020	WMWGORLF_1125
AX24490	605020	WMWGORLF_1125
AX24491	605020	WMWGORLF_1125
AX24492	605020	WMWGORLF_1125

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_1125

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>
AX24477	605009	WMWGORLF_1125
AX24478	605009	WMWGORLF_1125
AX24479	605009	WMWGORLF_1125
AX24480	605051	WMWGORLF_1125
AX24481	605051	WMWGORLF_1125
AX24482	605051	WMWGORLF_1125
AX24483	605051	WMWGORLF_1125
AX24484	605051	WMWGORLF_1125
AX24485	605051	WMWGORLF_1125
AX24486	605051	WMWGORLF_1125
AX24487	605051	WMWGORLF_1125
AX24488	605051	WMWGORLF_1125
AX24489	605051	WMWGORLF_1125
AX24490	605052	WMWGORLF_1125
AX24491	605052	WMWGORLF_1125
AX24492	605052	WMWGORLF_1125

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 0.5 mg 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 AX24483, AX24488, and AX24491 which were below the 2.5mg residue requirement.

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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24477

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00968	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0360	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	377	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	0.0949	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00288	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			250	3940	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	7.9	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.35	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	75		110	380	2200	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24477

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24486	Lithium, Total	mg/L	-0.000000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23	126	70 to 130	0.609	20	
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115	99.2	70 to 130	0.815	20	
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046	95.5	70 to 130	0.707	20	
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115	100	70 to 130	0.847	20	
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115	89.1	70 to 130	2.04	20	
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.615	20	
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115	92.5	70 to 130	0.873	20	
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115	102	70 to 130	0.955	20	
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15	103	70 to 130	0.356	20	
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115	95.5	70 to 130	1.86	20	
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115	91.5	70 to 130	2.10	20	
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115	91.8	70 to 130	0.838	20	
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75	240	70 to 130	3.81	20	
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115	102	70 to 130	1.17	20	
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115	94.8	70 to 130	1.03	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX24477

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60		0.589 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, 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



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24478

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8		5	0.0010	0.005	J 0.00480	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	0.0126	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7		2	0.02	0.1	J 0.0846	mg/L
* Calcium, Total	HRG	10/19/2017	EPA 200.7		100	10	50	373	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	0.0274	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7		2	0.010	0.05	0.249	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C		1		250	3420	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E		1	0.60	2.00	3.1	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C		1	0.032	0.10	0.14	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E		60	84.0	300	1900	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24478

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115	99.2	70 to 130	0.815	20	
AX24486	Lithium, Total	mg/L	-0.000000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23	126	70 to 130	0.609	20	
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115	92.5	70 to 130	0.873	20	
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115	102	70 to 130	0.955	20	
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115	91.5	70 to 130	2.10	20	
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115	91.8	70 to 130	0.838	20	
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75	240	70 to 130	3.81	20	
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115	89.1	70 to 130	2.04	20	
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.615	20	
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115	102	70 to 130	1.17	20	
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115	94.8	70 to 130	1.03	20	
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15	103	70 to 130	0.356	20	
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115	95.5	70 to 130	1.86	20	
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046	95.5	70 to 130	0.707	20	
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115	100	70 to 130	0.847	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX24478

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec
				Limit				Duplicate	LFB	Limit	Prec
AX24236	Solids, Dissolved	mg/L	5.00	25				2560	52.0	40 to 60	0.589
											5

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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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24479

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	J 0.00138	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.0121	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0716	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	294	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00350	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	0.122	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/23/2017	SM 2540C	1			125	2360	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	34	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.19	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	60		84.0	300	1300	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24479

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115	99.2	70 to 130	0.815	20	
AX24486	Lithium, Total	mg/L	-0.00000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23	126	70 to 130	0.609	20	
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15	103	70 to 130	0.356	20	
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115	95.5	70 to 130	1.86	20	
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046	95.5	70 to 130	0.707	20	
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115	100	70 to 130	0.847	20	
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115	92.5	70 to 130	0.873	20	
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115	102	70 to 130	0.955	20	
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115	91.5	70 to 130	2.10	20	
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115	91.8	70 to 130	0.838	20	
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75	240	70 to 130	3.81	20	
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115	102	70 to 130	1.17	20	
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115	94.8	70 to 130	1.03	20	
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115	89.1	70 to 130	2.04	20	
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.615	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX24479

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX24236	Solids, Dissolved	mg/L	5.00	25			2560	52.0	40 to 60	0.589	5

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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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24480

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	J 0.00103	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.0126	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0695	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	294	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00463	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	0.184	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			250	2650	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	10		6.00	20	140	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.21	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	60		84.0	300	1400	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24480

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115		99.2	70 to 130	0.815	20
AX24486	Lithium, Total	mg/L	-0.000000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23		126	70 to 130	0.609	20
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115		91.5	70 to 130	2.10	20
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115		91.8	70 to 130	0.838	20
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75		240	70 to 130	3.81	20
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115		89.1	70 to 130	2.04	20
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115		101	70 to 130	0.615	20
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046		95.5	70 to 130	0.707	20
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115		100	70 to 130	0.847	20
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115		102	70 to 130	1.17	20
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115		94.8	70 to 130	1.03	20
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115		92.5	70 to 130	0.873	20
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115		102	70 to 130	0.955	20
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15		103	70 to 130	0.356	20
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115		95.5	70 to 130	1.86	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX24480

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60	1.20	5

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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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24481

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00870	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0330	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	341	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	0.0618	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00404	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			250	3180	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	2.0	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.31	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	60		84.0	300	1800	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24481

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115	99.2	70 to 130	0.815	20	
AX24486	Lithium, Total	mg/L	-0.000000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23	126	70 to 130	0.609	20	
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115	92.5	70 to 130	0.873	20	
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115	102	70 to 130	0.955	20	
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046	95.5	70 to 130	0.707	20	
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115	100	70 to 130	0.847	20	
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115	102	70 to 130	1.17	20	
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115	94.8	70 to 130	1.03	20	
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115	91.5	70 to 130	2.10	20	
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115	91.8	70 to 130	0.838	20	
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75	240	70 to 130	3.81	20	
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115	89.1	70 to 130	2.04	20	
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.615	20	
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15	103	70 to 130	0.356	20	
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115	95.5	70 to 130	1.86	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX24481

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec		
			Limit	Limit			Duplicate	LFB	Limit	Limit		
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60		1.20	5

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

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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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-7DUP

Laboratory ID Number: AX24482

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	J 0.00139	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.0124	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0711	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	287	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00364	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	0.122	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			125	2480	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	34	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.20	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	60		84.0	300	1300	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-7DUP

Laboratory ID Number: AX24482

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24486	Lithium, Total	mg/L	-0.000000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23	126	70 to 130	0.609	20	
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115	99.2	70 to 130	0.815	20	
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115	92.5	70 to 130	0.873	20	
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115	102	70 to 130	0.955	20	
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115	91.5	70 to 130	2.10	20	
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115	91.8	70 to 130	0.838	20	
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75	240	70 to 130	3.81	20	
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115	102	70 to 130	1.17	20	
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115	94.8	70 to 130	1.03	20	
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15	103	70 to 130	0.356	20	
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115	95.5	70 to 130	1.86	20	
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046	95.5	70 to 130	0.707	20	
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115	100	70 to 130	0.847	20	
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115	89.1	70 to 130	2.04	20	
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.615	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-7DUP

Laboratory ID Number: AX24482

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60	1.20	5

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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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24483

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/20/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

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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: WMWGORLFFB
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24483

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec Limit
			MB	Limit					Limit	Rec	Limit	Prec	
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115	99.2	70 to 130	0.815	20
AX24486	Lithium, Total	mg/L	-0.000000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23	126	70 to 130	0.609	20
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115	89.1	70 to 130	2.04	20
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.615	20
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046	95.5	70 to 130	0.707	20
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115	100	70 to 130	0.847	20
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115	91.5	70 to 130	2.10	20
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115	91.8	70 to 130	0.838	20
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75	240	70 to 130	3.81	20
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115	92.5	70 to 130	0.873	20
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115	102	70 to 130	0.955	20
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115	102	70 to 130	1.17	20
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115	94.8	70 to 130	1.03	20
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15	103	70 to 130	0.356	20
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115	95.5	70 to 130	1.86	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24483

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60	1.20	5

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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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24484

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.0122	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0561	mg/L
* Calcium, Total	HRG	10/25/2017	EPA 200.7	10		1.0	5.0	296	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.0155	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	J 0.0206	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00274	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			250	3030	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	2.1	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.20	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	60		84.0	300	1700	mg/L

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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: WMWGORLF
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24484

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24486	Lithium, Total	mg/L	-0.000000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23	126	70 to 130	0.609	20
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115	99.2	70 to 130	0.815	20
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046	95.5	70 to 130	0.707	20
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115	100	70 to 130	0.847	20
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115	89.1	70 to 130	2.04	20
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.615	20
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115	92.5	70 to 130	0.873	20
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115	102	70 to 130	0.955	20
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115	91.5	70 to 130	2.10	20
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115	91.8	70 to 130	0.838	20
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75	240	70 to 130	3.81	20
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15	103	70 to 130	0.356	20
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115	95.5	70 to 130	1.86	20
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115	102	70 to 130	1.17	20
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115	94.8	70 to 130	1.03	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX24484

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60	1.20	5

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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



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24485

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8		5	0.0010	0.005	J 0.00133	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	0.0119	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7		2	0.02	0.1	J 0.0460	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7		10	1.0	5.0	309	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8		5	0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	J 0.00949	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1		1	0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7		2	0.010	0.05	J 0.0352	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8		5	0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8		5	0.0020	0.01	J 0.00205	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8		5	0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C		1		250	3110	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E		1	0.60	2.00	J 1.8	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C		1	0.032	0.10	0.25	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E		60	84.0	300	1900	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24485

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115	99.2	70 to 130	0.815	20	
AX24486	Lithium, Total	mg/L	-0.000000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23	126	70 to 130	0.609	20	
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115	92.5	70 to 130	0.873	20	
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115	102	70 to 130	0.955	20	
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115	91.5	70 to 130	2.10	20	
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115	91.8	70 to 130	0.838	20	
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75	240	70 to 130	3.81	20	
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115	89.1	70 to 130	2.04	20	
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.615	20	
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046	95.5	70 to 130	0.707	20	
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115	100	70 to 130	0.847	20	
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115	102	70 to 130	1.17	20	
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115	94.8	70 to 130	1.03	20	
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15	103	70 to 130	0.356	20	
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115	95.5	70 to 130	1.86	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX24485

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60	1.20	5

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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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-14 DUP

Laboratory ID Number: AX24486

Name	Analyst	Test Date	Reference	Vio	Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols											
* Arsenic, Total	JHK	10/20/2017	EPA 200.8			5	0.0010	0.005	J	0.00132	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8			5	0.0020	0.01		0.0111	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7			2	0.02	0.1	J	0.0465	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7			10	1.0	5.0		309	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8			5	0.00060	0.003	U	Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8			5	0.0020	0.01	J	0.00931	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/23/2017	EPA 245.1			1	0.00025	0.0005	U	Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7			2	0.010	0.05	J	0.0354	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8			5	0.0010	0.005	U	Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8			5	0.0020	0.01	U	Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8			5	0.00020	0.001	U	Not Detected	mg/L
General Characteristics											
* Solids, Dissolved	CES	10/24/2017	SM 2540C			1		250		3120	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E			1	0.60	2.00	J	1.8	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C			1	0.032	0.10		0.25	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E			60	84.0	300		1800	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
 Calcium recovery is out of range. Spike amount is less than 30% of the sample amount. SGC 12/11/17

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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-14 DUP

Laboratory ID Number: AX24486

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit	
			MB	Limit					Limit	Rec	Limit	Prec			
AX24486	Lithium, Total	mg/L	-0.000000683	0.022	0.20	0.288	0.290	0.190	0.17 to 0.23		126	70 to 130		0.609	20
AX24486	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0992	0.0984	0.100	0.085 to 0.115		99.2	70 to 130		0.815	20
AX24486	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.104	0.103	0.0967	0.085 to 0.115		92.5	70 to 130		0.873	20
AX24486	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.102	0.101	0.0994	0.085 to 0.115		102	70 to 130		0.955	20
AX24486	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0891	0.0873	0.0931	0.085 to 0.115		89.1	70 to 130		2.04	20
AX24486	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.101	0.101	0.103	0.085 to 0.115		101	70 to 130		0.615	20
AX24486	Mercury, Total by CVAA	mg/L	-0.0000126	0.0005	0.004	0.00382	0.00385	0.00385	0.0034 to 0.0046		95.5	70 to 130		0.707	20
AX24486	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.100	0.0992	0.0957	0.085 to 0.115		100	70 to 130		0.847	20
AX24486	Boron, Total	mg/L	-0.00127	0.044	1.00	1.07	1.07	0.965	0.85 to 1.15		103	70 to 130		0.356	20
AX24486	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.105	0.103	0.103	0.085 to 0.115		95.5	70 to 130		1.86	20
AX24486	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.102	0.103	0.085 to 0.115		102	70 to 130		1.17	20
AX24486	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0948	0.0938	0.0989	0.085 to 0.115		94.8	70 to 130		1.03	20
AX24486	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0915	0.0896	0.101	0.085 to 0.115		91.5	70 to 130		2.10	20
AX24486	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0918	0.0910	0.0989	0.085 to 0.115		91.8	70 to 130		0.838	20
AX24486	Calcium, Total	mg/L	-0.0241	0.22	5.00	321	309	4.94	4.25 to 5.75		240	70 to 130		3.81	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
 Calcium recovery is out of range. Spike amount is less than 30% of the sample amount. SGC 12/11/17

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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-14 DUP

Laboratory ID Number: AX24486

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec		
			Limit	Limit			Duplicate	LFB	Limit	Limit		
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60		1.20	5

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Expiration: June 30, 2018

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 Calcium recovery is out of range. Spike amount is less than 30% of the sample amount. SGC 12/11/17

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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24487

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.0112	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0641	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	263	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.0563	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	0.0634	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			125	2600	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	J 1.4	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.35	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	60		84.0	300	1600	mg/L

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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
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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24487

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24492	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.0965	0.0965	0.103	0.085 to 0.115	88.6	70 to 130	0.0092220	
AX24492	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.106	0.106	0.0967	0.085 to 0.115	93.2	70 to 130	0.882	20
AX24492	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0932	0.0927	0.101	0.085 to 0.115	93.2	70 to 130	0.582	20
AX24492	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0897	0.0898	0.0989	0.085 to 0.115	89.7	70 to 130	0.170	20
AX24492	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0989	0.0993	0.100	0.085 to 0.115	98.9	70 to 130	0.418	20
AX24492	Lithium, Total	mg/L	-0.0000557	0.022	0.20	0.250	0.251	0.194	0.17 to 0.23	117	70 to 130	0.354	20
AX24491	Mercury, Total by CVAA	mg/L	0.0000214	0.0005	0.004	0.00385	0.00383	0.00388	0.0034 to 0.0046	96.2	70 to 130	0.359	20
AX24492	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0894	0.0909	0.0931	0.085 to 0.115	89.4	70 to 130	1.66	20
AX24492	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.104	0.103	0.085 to 0.115	101	70 to 130	0.108	20
AX24492	Boron, Total	mg/L	0.000431	0.044	1.00	1.05	1.05	0.992	0.85 to 1.15	100	70 to 130	0.371	20
AX24492	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.0948	0.0959	0.0957	0.085 to 0.115	94.8	70 to 130	1.18	20
AX24492	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0923	0.0917	0.0989	0.085 to 0.115	92.3	70 to 130	0.600	20
AX24492	Calcium, Total	mg/L	-0.0246	0.22	5.00	292	324	4.97	4.25 to 5.75	-100	70 to 130	10.4	20
AX24492	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.0975	0.0971	0.103	0.085 to 0.115	97.5	70 to 130	0.350	20
AX24492	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.101	0.101	0.0994	0.085 to 0.115	101	70 to 130	0.211	20

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Comments: Test America, Pensacola NELAP ID: E81010

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX24487

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec		
			Limit	Limit			Duplicate	LFB	Limit	Limit		
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60		1.20	5

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CC:

Alabama Power General Test Laboratory
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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24488

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/20/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	mg/L

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24488

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AX24492	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.0965	0.0965	0.103	0.085 to 0.115	88.6	70 to 130	0.0092220	
AX24492	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0989	0.0993	0.100	0.085 to 0.115	98.9	70 to 130	0.418	20
AX24492	Lithium, Total	mg/L	-0.0000557	0.022	0.20	0.250	0.251	0.194	0.17 to 0.23	117	70 to 130	0.354	20
AX24492	Calcium, Total	mg/L	-0.0246	0.22	5.00	292	324	4.97	4.25 to 5.75	-100	70 to 130	10.4	20
AX24492	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.0975	0.0971	0.103	0.085 to 0.115	97.5	70 to 130	0.350	20
AX24492	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.101	0.101	0.0994	0.085 to 0.115	101	70 to 130	0.211	20
AX24492	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.106	0.106	0.0967	0.085 to 0.115	93.2	70 to 130	0.882	20
AX24492	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0932	0.0927	0.101	0.085 to 0.115	93.2	70 to 130	0.582	20
AX24492	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0897	0.0898	0.0989	0.085 to 0.115	89.7	70 to 130	0.170	20
AX24491	Mercury, Total by CVAA	mg/L	0.0000214	0.0005	0.004	0.00385	0.00383	0.00388	0.0034 to 0.0046	96.2	70 to 130	0.359	20
AX24492	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0894	0.0909	0.0931	0.085 to 0.115	89.4	70 to 130	1.66	20
AX24492	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.104	0.103	0.085 to 0.115	101	70 to 130	0.108	20
AX24492	Boron, Total	mg/L	0.000431	0.044	1.00	1.05	1.05	0.992	0.85 to 1.15	100	70 to 130	0.371	20
AX24492	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.0948	0.0959	0.0957	0.085 to 0.115	94.8	70 to 130	1.18	20
AX24492	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0923	0.0917	0.0989	0.085 to 0.115	92.3	70 to 130	0.600	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX24488

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60	1.20	5

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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24489

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00943	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0367	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	386	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.130	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	0.0826	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			250	3780	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	2.5	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.33	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	75		110	380	2300	mg/L

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24489

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24492	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.0965	0.0965	0.103	0.085 to 0.115		88.6	70 to 130	0.0092220	
AX24492	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.106	0.106	0.0967	0.085 to 0.115		93.2	70 to 130	0.882	20
AX24492	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0932	0.0927	0.101	0.085 to 0.115		93.2	70 to 130	0.582	20
AX24492	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0897	0.0898	0.0989	0.085 to 0.115		89.7	70 to 130	0.170	20
AX24492	Calcium, Total	mg/L	-0.0246	0.22	5.00	292	324	4.97	4.25 to 5.75		-100	70 to 130	10.4	20
AX24492	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.0975	0.0971	0.103	0.085 to 0.115		97.5	70 to 130	0.350	20
AX24492	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.101	0.101	0.0994	0.085 to 0.115		101	70 to 130	0.211	20
AX24492	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0989	0.0993	0.100	0.085 to 0.115		98.9	70 to 130	0.418	20
AX24492	Lithium, Total	mg/L	-0.0000557	0.022	0.20	0.250	0.251	0.194	0.17 to 0.23		117	70 to 130	0.354	20
AX24491	Mercury, Total by CVAA	mg/L	0.0000214	0.0005	0.004	0.00385	0.00383	0.00388	0.0034 to 0.0046		96.2	70 to 130	0.359	20
AX24492	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0894	0.0909	0.0931	0.085 to 0.115		89.4	70 to 130	1.66	20
AX24492	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.104	0.103	0.085 to 0.115		101	70 to 130	0.108	20
AX24492	Boron, Total	mg/L	0.000431	0.044	1.00	1.05	1.05	0.992	0.85 to 1.15		100	70 to 130	0.371	20
AX24492	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.0948	0.0959	0.0957	0.085 to 0.115		94.8	70 to 130	1.18	20
AX24492	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0923	0.0917	0.0989	0.085 to 0.115		92.3	70 to 130	0.600	20

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Laboratory certification ID: E571114

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX24489

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24489	Solids, Dissolved	mg/L	2.00	25			3690	53.0	40 to 60	1.20	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, 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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24490

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.0147	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	0.107	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	337	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	0.260	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			250	2570	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	5.1	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	60		84.0	300	1500	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24490

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24492	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.0965	0.0965	0.103	0.085 to 0.115		88.6	70 to 130	0.0092220	
AX24492	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.106	0.106	0.0967	0.085 to 0.115		93.2	70 to 130	0.882	20
AX24492	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0932	0.0927	0.101	0.085 to 0.115		93.2	70 to 130	0.582	20
AX24492	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0897	0.0898	0.0989	0.085 to 0.115		89.7	70 to 130	0.170	20
AX24492	Calcium, Total	mg/L	-0.0246	0.22	5.00	292	324	4.97	4.25 to 5.75		-100	70 to 130	10.4	20
AX24492	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.0975	0.0971	0.103	0.085 to 0.115		97.5	70 to 130	0.350	20
AX24492	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.101	0.101	0.0994	0.085 to 0.115		101	70 to 130	0.211	20
AX24492	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0989	0.0993	0.100	0.085 to 0.115		98.9	70 to 130	0.418	20
AX24492	Lithium, Total	mg/L	-0.0000557	0.022	0.20	0.250	0.251	0.194	0.17 to 0.23		117	70 to 130	0.354	20
AX24491	Mercury, Total by CVAA	mg/L	0.0000214	0.0005	0.004	0.00385	0.00383	0.00388	0.0034 to 0.0046		96.2	70 to 130	0.359	20
AX24492	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0894	0.0909	0.0931	0.085 to 0.115		89.4	70 to 130	1.66	20
AX24492	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.104	0.103	0.085 to 0.115		101	70 to 130	0.108	20
AX24492	Boron, Total	mg/L	0.000431	0.044	1.00	1.05	1.05	0.992	0.85 to 1.15		100	70 to 130	0.371	20
AX24492	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.0948	0.0959	0.0957	0.085 to 0.115		94.8	70 to 130	1.18	20
AX24492	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0923	0.0917	0.0989	0.085 to 0.115		92.3	70 to 130	0.600	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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX24490

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24492	Solids, Dissolved	mg/L	2.00	25			2300	53.0	40 to 60	1.81	5

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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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24491

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	10/20/2017	EPA 200.7	2		0.10	0.5	U Not Detected	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	U Not Detected	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	1		1.40	5.00	U <1.4	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: WMWGORLFEB
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24491

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24492	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.0965	0.0965	0.103	0.085 to 0.115	88.6	70 to 130	0.0092	220	
AX24492	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0989	0.0993	0.100	0.085 to 0.115	98.9	70 to 130	0.418	20	
AX24492	Lithium, Total	mg/L	-0.0000557	0.022	0.20	0.250	0.251	0.194	0.17 to 0.23	117	70 to 130	0.354	20	
AX24492	Calcium, Total	mg/L	-0.0246	0.22	5.00	292	324	4.97	4.25 to 5.75	-100	70 to 130	10.4	20	
AX24492	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.0975	0.0971	0.103	0.085 to 0.115	97.5	70 to 130	0.350	20	
AX24492	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.101	0.101	0.0994	0.085 to 0.115	101	70 to 130	0.211	20	
AX24492	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.106	0.106	0.0967	0.085 to 0.115	93.2	70 to 130	0.882	20	
AX24492	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0932	0.0927	0.101	0.085 to 0.115	93.2	70 to 130	0.582	20	
AX24492	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0897	0.0898	0.0989	0.085 to 0.115	89.7	70 to 130	0.170	20	
AX24491	Mercury, Total by CVAA	mg/L	0.0000214	0.0005	0.004	0.00385	0.00383	0.00388	0.0034 to 0.0046	96.2	70 to 130	0.359	20	
AX24492	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0894	0.0909	0.0931	0.085 to 0.115	89.4	70 to 130	1.66	20	
AX24492	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.104	0.103	0.085 to 0.115	101	70 to 130	0.108	20	
AX24492	Boron, Total	mg/L	0.000431	0.044	1.00	1.05	1.05	0.992	0.85 to 1.15	100	70 to 130	0.371	20	
AX24492	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.0948	0.0959	0.0957	0.085 to 0.115	94.8	70 to 130	1.18	20	
AX24492	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0923	0.0917	0.0989	0.085 to 0.115	92.3	70 to 130	0.600	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: WMWGORLFEB
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX24491

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec		
			Limit				Duplicate	LFB	Limit	Limit	Prec	Limit
AX24492	Solids, Dissolved	mg/L	2.00	25			2300	53.0	40 to 60		1.81	5

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24492

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	J 0.00315	mg/L
* Barium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	0.0124	mg/L
* Beryllium, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Boron, Total	HRG	10/20/2017	EPA 200.7	2		0.02	0.1	J 0.0452	mg/L
* Calcium, Total	HRG	10/18/2017	EPA 200.7	10		1.0	5.0	297	mg/L
* Cadmium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
* Antimony, Total	JHK	10/20/2017	EPA 200.8	5		0.00060	0.003	U Not Detected	mg/L
* Cobalt, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	J 0.00786	mg/L
* Chromium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	10/30/2017	EPA 245.1	1		0.00025	0.0005	U Not Detected	mg/L
* Lithium, Total	HRG	10/20/2017	EPA 200.7	2		0.010	0.05	J 0.0164	mg/L
* Molybdenum, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Lead, Total	JHK	10/20/2017	EPA 200.8	5		0.0010	0.005	U Not Detected	mg/L
* Selenium, Total	JHK	10/20/2017	EPA 200.8	5		0.0020	0.01	U Not Detected	mg/L
* Thallium, Total	JHK	10/20/2017	EPA 200.8	5		0.00020	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	10/24/2017	SM 2540C	1			125	2380	mg/L
* Chloride, Total, by Test America	SGC	12/11/2017	SM 4500 Cl_E	1		0.60	2.00	3.8	mg/L
* Fluoride, Total, by Test America	SGC	12/11/2017	SM 4500 F_C	1		0.032	0.10	0.17	mg/L
* Sulfate, Total, by Test America	SGC	12/11/2017	SM 4500 SO4_E	60		84.0	300	1300	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
 Calcium recovery is out of range. Spike amount is less than 30% of the sample amount. SGC 12/11/17

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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24492

Sample	Analysis	Units	MB		Spike	MS	MSD	LFB	LFB		Rec		Prec	Limit
			MB	Limit					Limit	Rec	Limit	Prec		
AX24492	Cobalt, Total	mg/L	0.00000197	0.0044	0.10	0.0965	0.0965	0.103	0.085 to 0.115	88.6	70 to 130	0.0092220		
AX24492	Lead, Total	mg/L	0.00000890	0.0022	0.10	0.0989	0.0993	0.100	0.085 to 0.115	98.9	70 to 130	0.418	20	
AX24492	Lithium, Total	mg/L	-0.0000557	0.022	0.20	0.250	0.251	0.194	0.17 to 0.23	117	70 to 130	0.354	20	
AX24492	Barium, Total	mg/L	0.000000410	0.0044	0.10	0.106	0.106	0.0967	0.085 to 0.115	93.2	70 to 130	0.882	20	
AX24492	Beryllium, Total	mg/L	0.0000116	0.00132	0.10	0.0932	0.0927	0.101	0.085 to 0.115	93.2	70 to 130	0.582	20	
AX24492	Cadmium, Total	mg/L	0.00000327	0.00066	0.10	0.0897	0.0898	0.0989	0.085 to 0.115	89.7	70 to 130	0.170	20	
AX24492	Calcium, Total	mg/L	-0.0246	0.22	5.00	292	324	4.97	4.25 to 5.75	-100	70 to 130	10.4	20	
AX24492	Chromium, Total	mg/L	0.0000343	0.0044	0.10	0.0975	0.0971	0.103	0.085 to 0.115	97.5	70 to 130	0.350	20	
AX24492	Thallium, Total	mg/L	0.00000684	0.00044	0.10	0.101	0.101	0.0994	0.085 to 0.115	101	70 to 130	0.211	20	
AX24491	Mercury, Total by CVAA	mg/L	0.0000214	0.0005	0.004	0.00385	0.00383	0.00388	0.0034 to 0.0046	96.2	70 to 130	0.359	20	
AX24492	Antimony, Total	mg/L	0.0000494	0.00132	0.10	0.0894	0.0909	0.0931	0.085 to 0.115	89.4	70 to 130	1.66	20	
AX24492	Arsenic, Total	mg/L	0.00000585	0.0022	0.10	0.104	0.104	0.103	0.085 to 0.115	101	70 to 130	0.108	20	
AX24492	Boron, Total	mg/L	0.000431	0.044	1.00	1.05	1.05	0.992	0.85 to 1.15	100	70 to 130	0.371	20	
AX24492	Molybdenum, Total	mg/L	0.00000984	0.0044	0.10	0.0948	0.0959	0.0957	0.085 to 0.115	94.8	70 to 130	1.18	20	
AX24492	Selenium, Total	mg/L	0.000354	0.0044	0.10	0.0923	0.0917	0.0989	0.085 to 0.115	92.3	70 to 130	0.600	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
 Calcium recovery is out of range. Spike amount is less than 30% of the sample amount. SGC 12/11/17

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: 17-Oct-17
 Customer ID:
 Delivery Date: 18-Oct-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX24492

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX24492	Solids, Dissolved	mg/L	2.00	25			2300	53.0	40 to 60	1.81	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, 2018

Comments: Test America, Pensacola NELAP ID: E81010
 Calcium recovery is out of range. Spike amount is less than 30% of the sample amount. SGC 12/11/17

CC:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 10/17/2017 15:00

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): Metals, Bottle 2 (250mL): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions
Comments	All anions outsourced to Test America, Pensacola

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-19	10/17/2017	10:00	4	Groundwater		AX24489
MW-20	10/17/2017	11:05	4	Groundwater		AX24490
EB-1	10/17/2017	11:58	4	Equipment Blank		AX24491
MW-16	10/17/2017	12:12	4	Groundwater		AX24492

Relinquished By	Received By	Date/Time
<i>[Signature]</i>	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.10.18 11:02:35 -0500</small>	10/18/2017 11:02

SmarTroll ID	4696-23443-3-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	Cooler Temp
		0.4 degrees C
		Thermometer ID
		6035-30997-2-2
		pH Strip ID
		6153-32039-10-6



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/17/2017 14:30

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="Ben Rothschadl"/>		Location
Analysis Requested	<input type="text" value="Bottle 1 (500mL): Metals, Bottle 2 (250mL): Hg, Bottle 3 (500mL): TDS, Bottle 4 (250mL): Anions"/>				
Comments	<input type="text" value="All anions outsourced to Test America, Pensacola"/>				

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/17/2017	09:40	4	Groundwater		AX24484
MW-14	10/17/2017	11:05	4	Groundwater		AX24485
MW-14 DUP	10/17/2017	11:05	4	Sample Duplicate		AX24486
MW-15	10/17/2017	12:10	4	Groundwater		AX24487
FB-1	10/17/2017	12:30	4	Field Blank		AX24488

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.10.18 10:58:18 -0500</small>	10/18/2017 10:58

SmarTroll ID	<input type="text" value="5151-26193-1-1"/>	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>		
Turbidity ID	<input type="text" value="3901-20010-2-2"/>			
			Cooler Temp	<input type="text" value="0.6 degrees C"/>
			Thermometer ID	<input type="text" value="6035-30997-2-2"/>
		pH Strip ID	<input type="text" value="6153-32039-10-6"/>	

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Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA

Requested Complete Date
 Site Representative
 Collector

Results To
 Requested By
 Location

Analysis Requested
 Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	10/17/2017	07:58	4	Groundwater		AX24477
MW-6	10/17/2017	08:56	4	Groundwater		AX24478
MW-7	10/17/2017	09:50	4	Groundwater		AX24479
MW-8	10/17/2017	10:46	4	Groundwater		AX24480
MW-18	10/17/2017	11:47	4	Groundwater		AX24481
MW-7DUP	10/17/2017	09:50	4	Sample Duplicate		AX24482
FB-2	10/17/2017	12:10	4	Field Blank		AX24483

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.10.18 10:50:20 -0500</small>	10/18/2017 10:50

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="3901-20009-2-1"/>	
Cooler Temp	<input type="text" value="0.6 degrees C"/>	
Thermometer ID	<input type="text" value="6035-30997-2-2"/>	
	pH Strip ID	<input type="text" value="6153-32039-10-6"/>

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: 400-144723-10

TestAmerica SDG: Plant Gorgas CCB Landfills

Client Project/Site: CCR Plant Gorgas

For:

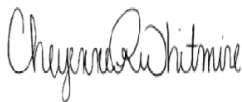
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

11/3/2017 9:44:27 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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: 400-144723-10
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-10

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-10

General Chemistry

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX24480 MW-8 (400-144723-148). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 373759 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: AX24477 MW-5 (400-144723-145), AX24478 MW-6 (400-144723-146), AX24479 MW-7 (400-144723-147), AX24480 MW-8 (400-144723-148), AX24481 MW-18 (400-144723-149), AX24482 MW-7 DUP (400-144723-150), AX24484 MW-13 (400-144723-152), (400-144723-A-127), (400-144723-A-127 MS), (400-144723-A-127 MSD), AX24485 MW-14 (400-144723-153), AX24486 MW-14 DUP (400-144723-154), AX24487 MW-15 (400-144723-155), AX24488 FB-1 (400-144723-156), AX24489 MW-19 (400-144723-157), AX24490 MW-20 (400-144723-158), AX24491 EB-1 (400-144723-159) and AX24492 MW-16 (400-144723-160). 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 374149 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.

Detection Summary

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

TestAmerica Job ID: 400-144723-10
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24477 MW-5

Lab Sample ID: 400-144723-145

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.9		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	2200		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24478 MW-6

Lab Sample ID: 400-144723-146

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.1		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	1900		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24479 MW-7

Lab Sample ID: 400-144723-147

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		2.0	0.60	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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24480 MW-8

Lab Sample ID: 400-144723-148

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	140		20	6.0	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.21		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24481 MW-18

Lab Sample ID: 400-144723-149

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	0.31		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24482 MW-7 DUP

Lab Sample ID: 400-144723-150

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		2.0	0.60	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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24483 FB-2

Lab Sample ID: 400-144723-151

No Detections.

Client Sample ID: AX24484 MW-13

Lab Sample ID: 400-144723-152

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	0.20		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1700		300	84	mg/L	60		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: 400-144723-10
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24485 MW-14

Lab Sample ID: 400-144723-153

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
Fluoride	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1900		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24486 MW-14 DUP

Lab Sample ID: 400-144723-154

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
Fluoride	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24487 MW-15

Lab Sample ID: 400-144723-155

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4	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	1600		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24488 FB-1

Lab Sample ID: 400-144723-156

No Detections.

Client Sample ID: AX24489 MW-19

Lab Sample ID: 400-144723-157

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.33		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2300		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24490 MW-20

Lab Sample ID: 400-144723-158

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.1		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	1500		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX24491 EB-1

Lab Sample ID: 400-144723-159

No Detections.

Client Sample ID: AX24492 MW-16

Lab Sample ID: 400-144723-160

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.8		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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

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: 400-144723-10
SDG: Plant Gorgas CCB Landfills

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: 400-144723-10
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-145	AX24477 MW-5	Water	10/17/17 07:58	10/19/17 09:37
400-144723-146	AX24478 MW-6	Water	10/17/17 08:56	10/19/17 09:37
400-144723-147	AX24479 MW-7	Water	10/17/17 09:50	10/19/17 09:37
400-144723-148	AX24480 MW-8	Water	10/17/17 10:46	10/19/17 09:37
400-144723-149	AX24481 MW-18	Water	10/17/17 11:47	10/19/17 09:37
400-144723-150	AX24482 MW-7 DUP	Water	10/17/17 09:50	10/19/17 09:37
400-144723-151	AX24483 FB-2	Water	10/17/17 12:10	10/19/17 09:37
400-144723-152	AX24484 MW-13	Water	10/17/17 09:40	10/19/17 09:37
400-144723-153	AX24485 MW-14	Water	10/17/17 11:05	10/19/17 09:37
400-144723-154	AX24486 MW-14 DUP	Water	10/17/17 11:05	10/19/17 09:37
400-144723-155	AX24487 MW-15	Water	10/17/17 12:10	10/19/17 09:37
400-144723-156	AX24488 FB-1	Water	10/17/17 12:30	10/19/17 09:37
400-144723-157	AX24489 MW-19	Water	10/17/17 10:00	10/19/17 09:37
400-144723-158	AX24490 MW-20	Water	10/17/17 11:05	10/19/17 09:37
400-144723-159	AX24491 EB-1	Water	10/17/17 11:58	10/19/17 09:37
400-144723-160	AX24492 MW-16	Water	10/17/17 12:12	10/19/17 09:37

Client Sample Results

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

TestAmerica Job ID: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24477 MW-5

Lab Sample ID: 400-144723-145

Date Collected: 10/17/17 07:58

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.9		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	0.35		0.10	0.032	mg/L			11/02/17 08:07	1
Sulfate	2200		380	110	mg/L			10/31/17 16:19	75

Client Sample ID: AX24478 MW-6

Lab Sample ID: 400-144723-146

Date Collected: 10/17/17 08:56

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.1		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	0.14		0.10	0.032	mg/L			11/02/17 08:10	1
Sulfate	1900		300	84	mg/L			10/28/17 15:59	60

Client Sample ID: AX24479 MW-7

Lab Sample ID: 400-144723-147

Date Collected: 10/17/17 09:50

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	0.19		0.10	0.032	mg/L			11/02/17 08:12	1
Sulfate	1300		300	84	mg/L			10/28/17 15:59	60

Client Sample ID: AX24480 MW-8

Lab Sample ID: 400-144723-148

Date Collected: 10/17/17 10:46

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		20	6.0	mg/L			10/31/17 08:35	10
Fluoride	0.21		0.10	0.032	mg/L			11/02/17 08:54	1
Sulfate	1400		300	84	mg/L			10/28/17 16:03	60

Client Sample ID: AX24481 MW-18

Lab Sample ID: 400-144723-149

Date Collected: 10/17/17 11:47

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	0.31		0.10	0.032	mg/L			11/02/17 09:00	1
Sulfate	1800		300	84	mg/L			10/28/17 16:03	60

Client Sample Results

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

TestAmerica Job ID: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24482 MW-7 DUP

Lab Sample ID: 400-144723-150

Date Collected: 10/17/17 09:50

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		2.0	0.60	mg/L			10/31/17 08:24	1
Fluoride	0.20		0.10	0.032	mg/L			11/02/17 09:02	1
Sulfate	1300		300	84	mg/L			10/28/17 16:03	60

Client Sample ID: AX24483 FB-2

Lab Sample ID: 400-144723-151

Date Collected: 10/17/17 12:10

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/31/17 08:27	1
Fluoride	<0.032		0.10	0.032	mg/L			11/02/17 09:05	1
Sulfate	<1.4		5.0	1.4	mg/L			10/28/17 16:24	1

Client Sample ID: AX24484 MW-13

Lab Sample ID: 400-144723-152

Date Collected: 10/17/17 09:40

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.1		2.0	0.60	mg/L			10/31/17 08:27	1
Fluoride	0.20		0.10	0.032	mg/L			11/02/17 09:07	1
Sulfate	1700		300	84	mg/L			10/28/17 16:07	60

Client Sample ID: AX24485 MW-14

Lab Sample ID: 400-144723-153

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/31/17 10:09	1
Fluoride	0.25		0.10	0.032	mg/L			11/02/17 09:09	1
Sulfate	1900		300	84	mg/L			10/31/17 14:05	60

Client Sample ID: AX24486 MW-14 DUP

Lab Sample ID: 400-144723-154

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8	J	2.0	0.60	mg/L			10/31/17 10:09	1
Fluoride	0.25		0.10	0.032	mg/L			11/02/17 09:12	1
Sulfate	1800		300	84	mg/L			10/31/17 14:05	60

Client Sample ID: AX24487 MW-15

Lab Sample ID: 400-144723-155

Date Collected: 10/17/17 12:10

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	J	2.0	0.60	mg/L			10/31/17 10:09	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24487 MW-15

Lab Sample ID: 400-144723-155

Date Collected: 10/17/17 12:10

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.35		0.10	0.032	mg/L			11/02/17 09:14	1
Sulfate	1600		300	84	mg/L			10/31/17 14:05	60

Client Sample ID: AX24488 FB-1

Lab Sample ID: 400-144723-156

Date Collected: 10/17/17 12:30

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/31/17 10:09	1
Fluoride	<0.032		0.10	0.032	mg/L			11/02/17 09:22	1
Sulfate	<1.4		5.0	1.4	mg/L			10/31/17 14:46	1

Client Sample ID: AX24489 MW-19

Lab Sample ID: 400-144723-157

Date Collected: 10/17/17 10:00

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		2.0	0.60	mg/L			10/31/17 10:09	1
Fluoride	0.33		0.10	0.032	mg/L			11/02/17 09:27	1
Sulfate	2300		380	110	mg/L			10/31/17 14:53	75

Client Sample ID: AX24490 MW-20

Lab Sample ID: 400-144723-158

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.1		2.0	0.60	mg/L			10/31/17 10:09	1
Fluoride	0.13		0.10	0.032	mg/L			11/02/17 09:29	1
Sulfate	1500		300	84	mg/L			10/31/17 14:10	60

Client Sample ID: AX24491 EB-1

Lab Sample ID: 400-144723-159

Date Collected: 10/17/17 11:58

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			10/31/17 10:09	1
Fluoride	<0.032		0.10	0.032	mg/L			11/02/17 09:33	1
Sulfate	<1.4	F1 F2	5.0	1.4	mg/L			10/31/17 14:46	1

Client Sample ID: AX24492 MW-16

Lab Sample ID: 400-144723-160

Date Collected: 10/17/17 12:12

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.8		2.0	0.60	mg/L			10/31/17 10:09	1
Fluoride	0.17		0.10	0.032	mg/L			11/02/17 09:35	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-144723-10
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24492 MW-16

Lab Sample ID: 400-144723-160

Date Collected: 10/17/17 12:12

Matrix: Water

Date Received: 10/19/17 09:37

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1300		300	84	mg/L			10/31/17 14:10	60

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-10
SDG: Plant Gorgas CCB Landfills

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

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: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24477 MW-5
Date Collected: 10/17/17 07:58
Date Received: 10/19/17 09:37

Lab Sample ID: 400-144723-145
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374351	11/02/17 08:07	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	374162	10/31/17 16:19	JLB	TAL PEN

Client Sample ID: AX24478 MW-6
Date Collected: 10/17/17 08:56
Date Received: 10/19/17 09:37

Lab Sample ID: 400-144723-146
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374351	11/02/17 08:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 15:59	JLB	TAL PEN

Client Sample ID: AX24479 MW-7
Date Collected: 10/17/17 09:50
Date Received: 10/19/17 09:37

Lab Sample ID: 400-144723-147
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374351	11/02/17 08:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 15:59	JLB	TAL PEN

Client Sample ID: AX24480 MW-8
Date Collected: 10/17/17 10:46
Date Received: 10/19/17 09:37

Lab Sample ID: 400-144723-148
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		10	374016	10/31/17 08:35	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 08:54	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 16:03	JLB	TAL PEN

Client Sample ID: AX24481 MW-18
Date Collected: 10/17/17 11:47
Date Received: 10/19/17 09:37

Lab Sample ID: 400-144723-149
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 16:03	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24482 MW-7 DUP

Lab Sample ID: 400-144723-150

Date Collected: 10/17/17 09:50

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 16:03	JLB	TAL PEN

Client Sample ID: AX24483 FB-2

Lab Sample ID: 400-144723-151

Date Collected: 10/17/17 12:10

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:05	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	373759	10/28/17 16:24	JLB	TAL PEN

Client Sample ID: AX24484 MW-13

Lab Sample ID: 400-144723-152

Date Collected: 10/17/17 09:40

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374016	10/31/17 08:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:07	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	373759	10/28/17 16:07	JLB	TAL PEN

Client Sample ID: AX24485 MW-14

Lab Sample ID: 400-144723-153

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374065	10/31/17 10:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:09	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	374149	10/31/17 14:05	JLB	TAL PEN

Client Sample ID: AX24486 MW-14 DUP

Lab Sample ID: 400-144723-154

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374065	10/31/17 10:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	374149	10/31/17 14:05	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24487 MW-15

Lab Sample ID: 400-144723-155

Date Collected: 10/17/17 12:10

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374065	10/31/17 10:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	374149	10/31/17 14:05	JLB	TAL PEN

Client Sample ID: AX24488 FB-1

Lab Sample ID: 400-144723-156

Date Collected: 10/17/17 12:30

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374065	10/31/17 10:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:22	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	374149	10/31/17 14:46	JLB	TAL PEN

Client Sample ID: AX24489 MW-19

Lab Sample ID: 400-144723-157

Date Collected: 10/17/17 10:00

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374065	10/31/17 10:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	374149	10/31/17 14:53	JLB	TAL PEN

Client Sample ID: AX24490 MW-20

Lab Sample ID: 400-144723-158

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374065	10/31/17 10:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:29	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	374149	10/31/17 14:10	JLB	TAL PEN

Client Sample ID: AX24491 EB-1

Lab Sample ID: 400-144723-159

Date Collected: 10/17/17 11:58

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374065	10/31/17 10:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:33	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	374149	10/31/17 14:46	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-144723-10
SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24492 MW-16

Lab Sample ID: 400-144723-160

Date Collected: 10/17/17 12:12

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	374065	10/31/17 10:09	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374380	11/02/17 09:35	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	374149	10/31/17 14:10	JLB	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: 400-144723-10
SDG: Plant Gorgas CCB Landfills

General Chemistry

Analysis Batch: 373759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-146	AX24478 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-144723-147	AX24479 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-144723-148	AX24480 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-144723-149	AX24481 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-144723-150	AX24482 MW-7 DUP	Total/NA	Water	SM 4500 SO4 E	
400-144723-151	AX24483 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-144723-152	AX24484 MW-13	Total/NA	Water	SM 4500 SO4 E	
MB 400-373759/5	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-373759/6	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-373759/9	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144723-A-127 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-144723-A-127 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 374016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-145	AX24477 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-144723-146	AX24478 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-144723-147	AX24479 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-144723-148	AX24480 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-144723-149	AX24481 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-144723-150	AX24482 MW-7 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144723-151	AX24483 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-144723-152	AX24484 MW-13	Total/NA	Water	SM 4500 Cl- E	
MB 400-374016/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-374016/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-374016/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144723-A-124 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-144723-A-124 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	
400-144723-A-127 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-144723-A-127 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 374065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-153	AX24485 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-144723-154	AX24486 MW-14 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144723-155	AX24487 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-144723-156	AX24488 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-144723-157	AX24489 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-144723-158	AX24490 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-144723-159	AX24491 EB-1	Total/NA	Water	SM 4500 Cl- E	
400-144723-160	AX24492 MW-16	Total/NA	Water	SM 4500 Cl- E	
MB 400-374065/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-374065/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-374065/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144723-154 MS	AX24486 MW-14 DUP	Total/NA	Water	SM 4500 Cl- E	
400-144723-154 MSD	AX24486 MW-14 DUP	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 374149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-153	AX24485 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-144723-154	AX24486 MW-14 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: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

General Chemistry (Continued)

Analysis Batch: 374149 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-155	AX24487 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-144723-156	AX24488 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-144723-157	AX24489 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-144723-158	AX24490 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-144723-159	AX24491 EB-1	Total/NA	Water	SM 4500 SO4 E	
400-144723-160	AX24492 MW-16	Total/NA	Water	SM 4500 SO4 E	
MB 400-374149/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-374149/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-374149/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144723-159 MS	AX24491 EB-1	Total/NA	Water	SM 4500 SO4 E	
400-144723-159 MSD	AX24491 EB-1	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 374162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-145	AX24477 MW-5	Total/NA	Water	SM 4500 SO4 E	
MB 400-374162/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-374162/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-374162/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 374351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-145	AX24477 MW-5	Total/NA	Water	SM 4500 F C	
400-144723-146	AX24478 MW-6	Total/NA	Water	SM 4500 F C	
400-144723-147	AX24479 MW-7	Total/NA	Water	SM 4500 F C	
MB 400-374351/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374351/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144723-A-127 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144723-A-127 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
660-83448-C-7 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-148	AX24480 MW-8	Total/NA	Water	SM 4500 F C	
400-144723-149	AX24481 MW-18	Total/NA	Water	SM 4500 F C	
400-144723-150	AX24482 MW-7 DUP	Total/NA	Water	SM 4500 F C	
400-144723-151	AX24483 FB-2	Total/NA	Water	SM 4500 F C	
400-144723-152	AX24484 MW-13	Total/NA	Water	SM 4500 F C	
400-144723-153	AX24485 MW-14	Total/NA	Water	SM 4500 F C	
400-144723-154	AX24486 MW-14 DUP	Total/NA	Water	SM 4500 F C	
400-144723-155	AX24487 MW-15	Total/NA	Water	SM 4500 F C	
400-144723-156	AX24488 FB-1	Total/NA	Water	SM 4500 F C	
400-144723-157	AX24489 MW-19	Total/NA	Water	SM 4500 F C	
400-144723-158	AX24490 MW-20	Total/NA	Water	SM 4500 F C	
400-144723-159	AX24491 EB-1	Total/NA	Water	SM 4500 F C	
400-144723-160	AX24492 MW-16	Total/NA	Water	SM 4500 F C	
MB 400-374380/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-374380/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-144723-148 MS	AX24480 MW-8	Total/NA	Water	SM 4500 F C	
400-144723-148 MSD	AX24480 MW-8	Total/NA	Water	SM 4500 F C	
400-144723-156 DU	AX24488 FB-1	Total/NA	Water	SM 4500 F C	

QC Sample Results

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

TestAmerica Job ID: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-374016/6
Matrix: Water
Analysis Batch: 374016

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			10/31/17 07:53	1

Lab Sample ID: LCS 400-374016/7
Matrix: Water
Analysis Batch: 374016

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	30.4		mg/L		101	90 - 110

Lab Sample ID: MRL 400-374016/3
Matrix: Water
Analysis Batch: 374016

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	1.98	J	mg/L		99	50 - 150

Lab Sample ID: 400-144723-A-124 MS
Matrix: Water
Analysis Batch: 374016

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	3.9		10.0	15.8		mg/L		119	73 - 120

Lab Sample ID: 400-144723-A-124 MSD
Matrix: Water
Analysis Batch: 374016

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
Chloride	3.9		10.0	15.1		mg/L		112	73 - 120	5	8

Lab Sample ID: 400-144723-A-127 MS
Matrix: Water
Analysis Batch: 374016

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	4.9		10.0	15.9		mg/L		109	73 - 120

Lab Sample ID: 400-144723-A-127 MSD
Matrix: Water
Analysis Batch: 374016

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
Chloride	4.9		10.0	15.3		mg/L		104	73 - 120	3	8

Lab Sample ID: MB 400-374065/6
Matrix: Water
Analysis Batch: 374065

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			10/31/17 09:17	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: LCS 400-374065/7
Matrix: Water
Analysis Batch: 374065

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 400-374065/3
Matrix: Water
Analysis Batch: 374065

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	2.11		mg/L		105	50 - 150

Lab Sample ID: 400-144723-154 MS
Matrix: Water
Analysis Batch: 374065

Client Sample ID: AX24486 MW-14 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.8	J	10.0	12.4		mg/L		105	73 - 120

Lab Sample ID: 400-144723-154 MSD
Matrix: Water
Analysis Batch: 374065

Client Sample ID: AX24486 MW-14 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.8	J	10.0	12.2		mg/L		104	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-374351/3
Matrix: Water
Analysis Batch: 374351

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			11/02/17 07:18	1

Lab Sample ID: LCS 400-374351/4
Matrix: Water
Analysis Batch: 374351

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: 400-144723-A-127 MS
Matrix: Water
Analysis Batch: 374351

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
Fluoride	0.13		1.00	1.12		mg/L		99	75 - 125

QC Sample Results

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

TestAmerica Job ID: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-144723-A-127 MSD
Matrix: Water
Analysis Batch: 374351

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
Fluoride	0.13		1.00	1.12		mg/L		99	75 - 125	0	4

Lab Sample ID: 660-83448-C-7 DU
Matrix: Water
Analysis Batch: 374351

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.20		0.200		mg/L		0	4

Lab Sample ID: MB 400-374380/3
Matrix: Water
Analysis Batch: 374380

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			11/02/17 08:46	1

Lab Sample ID: LCS 400-374380/4
Matrix: Water
Analysis Batch: 374380

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: 400-144723-148 MS
Matrix: Water
Analysis Batch: 374380

Client Sample ID: AX24480 MW-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.21		1.00	1.17		mg/L		96	75 - 125

Lab Sample ID: 400-144723-148 MSD
Matrix: Water
Analysis Batch: 374380

Client Sample ID: AX24480 MW-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.21		1.00	1.19		mg/L		98	75 - 125	2	4

Lab Sample ID: 400-144723-156 DU
Matrix: Water
Analysis Batch: 374380

Client Sample ID: AX24488 FB-1
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: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-373759/5
Matrix: Water
Analysis Batch: 373759

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			10/28/17 15:32	1

Lab Sample ID: LCS 400-373759/6
Matrix: Water
Analysis Batch: 373759

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	13.8		mg/L		92	90 - 110

Lab Sample ID: MRL 400-373759/9
Matrix: Water
Analysis Batch: 373759

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	4.00	J	mg/L		80	50 - 150

Lab Sample ID: 400-144723-A-127 MS
Matrix: Water
Analysis Batch: 373759

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	1400	F1	600	1380	F1	mg/L		-9	77 - 128

Lab Sample ID: 400-144723-A-127 MSD
Matrix: Water
Analysis Batch: 373759

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
Sulfate	1400	F1	600	1360	F1	mg/L		-14	77 - 128	2	5

Lab Sample ID: MB 400-374149/6
Matrix: Water
Analysis Batch: 374149

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			10/31/17 13:43	1

Lab Sample ID: LCS 400-374149/7
Matrix: Water
Analysis Batch: 374149

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	13.7		mg/L		92	90 - 110

Lab Sample ID: MRL 400-374149/3
Matrix: Water
Analysis Batch: 374149

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	3.91	J	mg/L		78	50 - 150

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

Lab Sample ID: 400-144723-159 MS
Matrix: Water
Analysis Batch: 374149

Client Sample ID: AX24491 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	F1 F2	10.0	7.10	F1	mg/L		71	77 - 128

Lab Sample ID: 400-144723-159 MSD
Matrix: Water
Analysis Batch: 374149

Client Sample ID: AX24491 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	F1 F2	10.0	9.40	F2	mg/L		94	77 - 128	28	5

Lab Sample ID: MB 400-374162/6
Matrix: Water
Analysis Batch: 374162

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			10/31/17 15:59	1

Lab Sample ID: LCS 400-374162/7
Matrix: Water
Analysis Batch: 374162

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	13.8		mg/L		92	90 - 110

Lab Sample ID: MRL 400-374162/3
Matrix: Water
Analysis Batch: 374162

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	3.83	J	mg/L		77	50 - 150

Chain of Custody Record

Client Information		Sampler: Anthony Goggins/Ben Rothschild		Lab PM: Whitire, Cheyenne R	
Client Contact: Keith Komegay		Phone:		E-Mail: cheyenne.whitire@testamericainc.com	
Company: Alabama Power General Test Laboratory		Carrier Tracking No(s):		COC No: 400-56525-24537.1	
Address: 744 County Rd 87 GSC #8		Due Date Requested: 11/2/2017		Page: Page 1 of 1	
City: Callera		TAT Requested (days):		Job #:	
State, Zip: AL, 35040		Routine		Preservation Codes:	
Phone: 205-664-6004		Sample Date		M - Hexane N - None O - As ₂ O ₃ P - Na ₂ O ₄ S D - Nitric Acid E - NaHSO ₄ F - MeOH R - Na ₂ SO ₃ S - H ₂ SO ₄ G - Amchlor H - Ascoboric Acid I - Ice J - DI Water K - EDTA L - EDIA Other:	
Email: lk@spu.hemco.com		Sample Time		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO ₄ F - MeOH G - Amchlor H - Ascoboric Acid I - Ice J - DI Water K - EDTA L - EDIA Other:	
Project Name: CCR		Sample Matrix		M - Hexane N - None O - As ₂ O ₃ P - Na ₂ O ₄ S D - Nitric Acid E - NaHSO ₄ F - MeOH R - Na ₂ SO ₃ S - H ₂ SO ₄ G - Amchlor H - Ascoboric Acid I - Ice J - DI Water K - EDTA L - EDIA Other:	
Site: Gorgas Landfill		Preservation Code:		M - Hexane N - None O - As ₂ O ₃ P - Na ₂ O ₄ S D - Nitric Acid E - NaHSO ₄ F - MeOH R - Na ₂ SO ₃ S - H ₂ SO ₄ G - Amchlor H - Ascoboric Acid I - Ice J - DI Water K - EDTA L - EDIA Other:	
Sample Identification		Sample Type (C=comp, G=grab)		M - Hexane N - None O - As ₂ O ₃ P - Na ₂ O ₄ S D - Nitric Acid E - NaHSO ₄ F - MeOH R - Na ₂ SO ₃ S - H ₂ SO ₄ G - Amchlor H - Ascoboric Acid I - Ice J - DI Water K - EDTA L - EDIA Other:	
AX24477	10/17/17	0758	G	Water	SM 4500 F.C
AX24478	10/17/17	0856	G	Water	SM 4500 C.E
AX24479	10/17/17	0950	G	Water	SM 4500 S.O ₄ .E
AX24480	10/17/17	1046	G	Water	
AX24481	10/17/17	1147	G	Water	
AX24482	10/17/17	0950	G	Water	
AX24483	10/17/17	1210	G	Water	
AX24484	10/17/17	0940	G	Water	
Possible Hazard Identification		Sample Date		Special Instructions/Note:	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Irritable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/> Other (specify)		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> N Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> N Total Number of Containers <input checked="" type="checkbox"/> X		MW-5 MW-6 MW-7 MW-8 MW-18 MW-7DUP (Sample Duplicate) FB-2 (Field Blank) MW-13	
Empty Kit Relinquished by: Keith Komegay Relinquished by: Keith Komegay Relinquished by: Relinquished by:		Date/Time: 10/18/17 12:00 Date/Time: Date/Time:		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 B, Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:	
Custody Seals Intact: <input checked="" type="checkbox"/> Custody Seal No.:		Date/Time: 10/18/17 12:00 Date/Time: Date/Time:		Received by: APC Received by: Company Received by: Company Received by: Company Date/Time: 10/19/17 0930 Date/Time: Date/Time:	



Chain of Custody Record

Client Information		Sampler: Anthony Goggins/Ben Rothschild		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Client Contact: Keith Komegay		Phone:		E-Mail: cheyenne.whitmire@testamericainc.com		GOC No: 400-56625-24537.1	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC #8		City: Calera		Page: Page 1 of 1	
State, Zip: AL, 35040		Phone: 205-664-6004		E-Mail: [kkomeq@southernco.com]		Job #:	
Project Name: CCR		Project #: 40007143		SSOW#: [redacted]		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:	
Site: Gorgas Landfill		Due Date Requested: 11/2/2017		TAT Requested (days):		Special Instructions/Note:	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
AX24485		10/17/17		1105		G Water	
AX24486		10/17/17		1105		G Water	
AX24487		10/17/17		1210		G Water	
AX24488		10/17/17		1230		G Water	
AX24489		10/17/17		1000		G Water	
AX24490		10/17/17		1105		G Water	
AX24491		10/17/17		1158		G Water	
AX24492		10/17/17		1212		G Water	
Possible Hazard Identification		Toxic <input type="checkbox"/>		Flammable <input type="checkbox"/>		Skin Irritant <input type="checkbox"/>	
Non-Hazard <input type="checkbox"/>		Poison B <input type="checkbox"/>		Unknown <input type="checkbox"/>		Radiological <input type="checkbox"/>	
Deliverable Requested: I, II, III, IV, Other (specify)		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		Perform MSMSD (Yes or No) <input checked="" type="checkbox"/>		SM 4500 F.C. <input checked="" type="checkbox"/>	
		SM 4500 Cl.E. <input checked="" type="checkbox"/>		SM 4500 SO4.E. <input checked="" type="checkbox"/>		Total Number of containers	
						1 MW-14	
						1 MW-14 DUP (Sample Duplicate)	
						1 MW-15	
						1 FB-1 (Field Blank)	
						1 MW-19	
						1 MW-20	
						1 EB-1 (Equipment Blank)	
						1 MW-16	
Special Instructions/QC Requirements:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/>		Archive For _____ Months	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Keith Komegay		Date/Time: 10/18/17 12:00		Company: APC		Date/Time: 10/19/17 09:31 Company: [redacted]	
Relinquished by:		Date/Time:		Company:		Date/Time: Company:	
Relinquished by:		Date/Time:		Company:		Date/Time: Company:	
Custody, Seals Intact: <input checked="" type="checkbox"/>		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-10
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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: 400-144723-10
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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



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: 400-144723-9

TestAmerica SDG: Plant Gorgas CCB Landfills

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:

11/20/2017 3:35:01 PM

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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: 400-144723-9
SDG: Plant Gorgas CCB Landfills

Job ID: 400-144723-9

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144723-9

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-333872. The following samples were reduced due to limited volume: AX24459 MW-5 (400-144723-129), AX24460 MW-6 (400-144723-130), AX24460 MW-6 (400-144723-130[MS]), AX24460 MW-6 (400-144723-130[MSD]), AX24461 MW-7 (400-144723-131), AX24462 MW-8 (400-144723-132), AX24463 MW-18 (400-144723-133), AX24464 MW-7 DUP (400-144723-134), AX24465 FB-2 (400-144723-135), AX24466 MW-13 (400-144723-136), AX24467 MW-14 (400-144723-137), AX24468 MW-14 DUP (400-144723-138), AX24469 MW-15 (400-144723-139), AX24470 FB-1 (400-144723-140), AX24471 MW-19 (400-144723-141), AX24472 MW-20 (400-144723-142), AX24473 EB-1 (400-144723-143) and AX24474 MW-16 (400-144723-144).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-333869. The following samples were reduced due to limited volume: AX24459 MW-5 (400-144723-129), AX24460 MW-6 (400-144723-130), AX24460 MW-6 (400-144723-130[MS]), AX24460 MW-6 (400-144723-130[MSD]), AX24461 MW-7 (400-144723-131), AX24462 MW-8 (400-144723-132), AX24463 MW-18 (400-144723-133), AX24464 MW-7 DUP (400-144723-134), AX24465 FB-2 (400-144723-135), AX24466 MW-13 (400-144723-136), AX24467 MW-14 (400-144723-137), AX24468 MW-14 DUP (400-144723-138), AX24469 MW-15 (400-144723-139), AX24470 FB-1 (400-144723-140), AX24471 MW-19 (400-144723-141), AX24472 MW-20 (400-144723-142), AX24473 EB-1 (400-144723-143) and AX24474 MW-16 (400-144723-144).

Method Summary

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

TestAmerica Job ID: 400-144723-9
SDG: Plant Gorgas CCB Landfills

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: 400-144723-9
SDG: Plant Gorgas CCB Landfills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144723-129	AX24459 MW-5	Water	10/17/17 07:58	10/19/17 09:37
400-144723-130	AX24460 MW-6	Water	10/17/17 08:56	10/19/17 09:37
400-144723-131	AX24461 MW-7	Water	10/17/17 09:50	10/19/17 09:37
400-144723-132	AX24462 MW-8	Water	10/17/17 10:46	10/19/17 09:37
400-144723-133	AX24463 MW-18	Water	10/17/17 11:47	10/19/17 09:37
400-144723-134	AX24464 MW-7 DUP	Water	10/17/17 09:50	10/19/17 09:37
400-144723-135	AX24465 FB-2	Water	10/17/17 12:10	10/19/17 09:37
400-144723-136	AX24466 MW-13	Water	10/17/17 09:40	10/19/17 09:37
400-144723-137	AX24467 MW-14	Water	10/17/17 11:05	10/19/17 09:37
400-144723-138	AX24468 MW-14 DUP	Water	10/17/17 11:05	10/19/17 09:37
400-144723-139	AX24469 MW-15	Water	10/17/17 12:10	10/19/17 09:37
400-144723-140	AX24470 FB-1	Water	10/17/17 12:30	10/19/17 09:37
400-144723-141	AX24471 MW-19	Water	10/17/17 10:00	10/19/17 09:37
400-144723-142	AX24472 MW-20	Water	10/17/17 11:05	10/19/17 09:37
400-144723-143	AX24473 EB-1	Water	10/17/17 11:58	10/19/17 09:37
400-144723-144	AX24474 MW-16	Water	10/17/17 12:12	10/19/17 09:37

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24459 MW-5

Lab Sample ID: 400-144723-129

Date Collected: 10/17/17 07:58

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0565	U	0.0579	0.0581	1.00	0.0876	pCi/L	10/25/17 08:47	11/16/17 12:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/25/17 08:47	11/16/17 12:29	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.122	U	0.266	0.266	1.00	0.458	pCi/L	10/25/17 09:10	11/02/17 19:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/25/17 09:10	11/02/17 19:38	1
Y Carrier	84.9		40 - 110					10/25/17 09:10	11/02/17 19:38	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	0.178	U	0.272	0.272	5.00	0.458	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24460 MW-6

Lab Sample ID: 400-144723-130

Date Collected: 10/17/17 08:56

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.317		0.117	0.120	1.00	0.0930	pCi/L	10/25/17 08:47	11/16/17 12:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 08:47	11/16/17 12:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.314	U	0.337	0.338	1.00	0.552	pCi/L	10/25/17 09:10	11/02/17 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 09:10	11/02/17 19:39	1
Y Carrier	84.1		40 - 110					10/25/17 09:10	11/02/17 19:39	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	0.631		0.357	0.359	5.00	0.552	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24461 MW-7

Lab Sample ID: 400-144723-131

Date Collected: 10/17/17 09:50

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.121		0.0810	0.0818	1.00	0.0982	pCi/L	10/25/17 08:47	11/16/17 12:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					10/25/17 08:47	11/16/17 12:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.353	U	0.307	0.309	1.00	0.492	pCi/L	10/25/17 09:10	11/02/17 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					10/25/17 09:10	11/02/17 19:39	1
Y Carrier	84.9		40 - 110					10/25/17 09:10	11/02/17 19:39	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	0.474	U	0.318	0.320	5.00	0.492	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24462 MW-8

Lab Sample ID: 400-144723-132

Date Collected: 10/17/17 10:46

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.107		0.0690	0.0697	1.00	0.0841	pCi/L	10/25/17 08:47	11/16/17 12:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 08:47	11/16/17 12:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0613	U	0.309	0.309	1.00	0.555	pCi/L	10/25/17 09:10	11/02/17 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 09:10	11/02/17 19:39	1
Y Carrier	84.5		40 - 110					10/25/17 09:10	11/02/17 19:39	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	0.0455	U	0.317	0.317	5.00	0.555	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24463 MW-18

Lab Sample ID: 400-144723-133

Date Collected: 10/17/17 11:47

Matrix: Water

Date Received: 10/19/17 09:37

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		0.0796	0.0804	1.00	0.101	pCi/L	10/25/17 08:47	11/16/17 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/25/17 08:47	11/16/17 12:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.300	U	0.313	0.314	1.00	0.512	pCi/L	10/25/17 09:10	11/02/17 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/25/17 09:10	11/02/17 19:39	1
Y Carrier	83.7		40 - 110					10/25/17 09:10	11/02/17 19:39	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	0.427	U	0.323	0.324	5.00	0.512	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24464 MW-7 DUP

Lab Sample ID: 400-144723-134

Date Collected: 10/17/17 09:50

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0901	U	0.0736	0.0741	1.00	0.105	pCi/L	10/25/17 08:47	11/16/17 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					10/25/17 08:47	11/16/17 12:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.180	U	0.303	0.303	1.00	0.511	pCi/L	10/25/17 09:10	11/02/17 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					10/25/17 09:10	11/02/17 19:39	1
Y Carrier	87.5		40 - 110					10/25/17 09:10	11/02/17 19:39	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	0.270	U	0.312	0.312	5.00	0.511	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24465 FB-2

Lab Sample ID: 400-144723-135

Date Collected: 10/17/17 12:10

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0102	U	0.0461	0.0461	1.00	0.0934	pCi/L	10/25/17 08:47	11/16/17 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/25/17 08:47	11/16/17 13:42	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0626	U	0.268	0.268	1.00	0.467	pCi/L	10/25/17 09:10	11/02/17 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/25/17 09:10	11/02/17 19:39	1
Y Carrier	87.1		40 - 110					10/25/17 09:10	11/02/17 19:39	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	0.0728	U	0.272	0.272	5.00	0.467	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24466 MW-13

Lab Sample ID: 400-144723-136

Date Collected: 10/17/17 09:40

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.128		0.0817	0.0825	1.00	0.107	pCi/L	10/25/17 08:47	11/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 08:47	11/16/17 13:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.216	U	0.280	0.281	1.00	0.465	pCi/L	10/25/17 09:10	11/02/17 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/25/17 09:10	11/02/17 19:40	1
Y Carrier	83.7		40 - 110					10/25/17 09:10	11/02/17 19:40	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.344	U	0.292	0.293	5.00	0.465	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24467 MW-14

Lab Sample ID: 400-144723-137

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0967	U	0.0748	0.0753	1.00	0.106	pCi/L	10/25/17 08:47	11/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/25/17 08:47	11/16/17 13:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.118	U	0.235	0.235	1.00	0.401	pCi/L	10/25/17 09:10	11/02/17 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/25/17 09:10	11/02/17 19:40	1
Y Carrier	84.9		40 - 110					10/25/17 09:10	11/02/17 19:40	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.214	U	0.247	0.247	5.00	0.401	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24468 MW-14 DUP

Lab Sample ID: 400-144723-138

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0890	U	0.0712	0.0717	1.00	0.100	pCi/L	10/25/17 08:47	11/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/25/17 08:47	11/16/17 13:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.448	U	0.307	0.310	1.00	0.476	pCi/L	10/25/17 09:10	11/02/17 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/25/17 09:10	11/02/17 19:40	1
Y Carrier	86.4		40 - 110					10/25/17 09:10	11/02/17 19:40	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.537		0.315	0.318	5.00	0.476	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24469 MW-15

Lab Sample ID: 400-144723-139

Date Collected: 10/17/17 12:10

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.101	U	0.0766	0.0771	1.00	0.108	pCi/L	10/25/17 08:47	11/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					10/25/17 08:47	11/16/17 13:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0886	U	0.264	0.264	1.00	0.457	pCi/L	10/25/17 09:10	11/02/17 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					10/25/17 09:10	11/02/17 19:40	1
Y Carrier	88.2		40 - 110					10/25/17 09:10	11/02/17 19:40	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.189	U	0.275	0.275	5.00	0.457	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24470 FB-1

Lab Sample ID: 400-144723-140

Date Collected: 10/17/17 12:30

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0152	U	0.0551	0.0551	1.00	0.107	pCi/L	10/25/17 08:47	11/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 08:47	11/16/17 13:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.240	U	0.265	0.266	1.00	0.434	pCi/L	10/25/17 09:10	11/02/17 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/25/17 09:10	11/02/17 19:40	1
Y Carrier	83.4		40 - 110					10/25/17 09:10	11/02/17 19:40	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.255	U	0.271	0.272	5.00	0.434	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24471 MW-19

Lab Sample ID: 400-144723-141

Date Collected: 10/17/17 10:00

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.204		0.0943	0.0960	1.00	0.0962	pCi/L	10/25/17 08:47	11/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					10/25/17 08:47	11/16/17 13:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.317	U	0.306	0.307	1.00	0.495	pCi/L	10/25/17 09:10	11/02/17 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					10/25/17 09:10	11/02/17 19:40	1
Y Carrier	84.9		40 - 110					10/25/17 09:10	11/02/17 19:40	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.521		0.320	0.322	5.00	0.495	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24472 MW-20

Lab Sample ID: 400-144723-142

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.278		0.106	0.109	1.00	0.111	pCi/L	10/25/17 08:47	11/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					10/25/17 08:47	11/16/17 13:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.458		0.285	0.288	1.00	0.435	pCi/L	10/25/17 09:10	11/02/17 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					10/25/17 09:10	11/02/17 19:40	1
Y Carrier	86.0		40 - 110					10/25/17 09:10	11/02/17 19:40	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.736		0.304	0.308	5.00	0.435	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24473 EB-1

Lab Sample ID: 400-144723-143

Date Collected: 10/17/17 11:58

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0522	U	0.0616	0.0618	1.00	0.0999	pCi/L	10/25/17 08:47	11/16/17 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/25/17 08:47	11/16/17 13:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.386	U	0.268	0.270	1.00	0.415	pCi/L	10/25/17 09:10	11/02/17 19:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/25/17 09:10	11/02/17 19:42	1
Y Carrier	83.4		40 - 110					10/25/17 09:10	11/02/17 19:42	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	0.438		0.275	0.277	5.00	0.415	pCi/L		11/20/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24474 MW-16

Lab Sample ID: 400-144723-144

Date Collected: 10/17/17 12:12

Matrix: Water

Date Received: 10/19/17 09:37

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0696	U	0.0647	0.0650	1.00	0.0970	pCi/L	10/25/17 08:47	11/16/17 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/25/17 08:47	11/16/17 13:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.714		0.294	0.301	1.00	0.412	pCi/L	10/25/17 09:10	11/02/17 19:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/25/17 09:10	11/02/17 19:42	1
Y Carrier	87.9		40 - 110					10/25/17 09:10	11/02/17 19:42	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	0.783		0.301	0.308	5.00	0.412	pCi/L		11/20/17 14:25	1

Definitions/Glossary

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

TestAmerica Job ID: 400-144723-9
SDG: Plant Gorgas CCB Landfills

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: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24459 MW-5

Lab Sample ID: 400-144723-129

Date Collected: 10/17/17 07:58

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337552	11/16/17 12:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24460 MW-6

Lab Sample ID: 400-144723-130

Date Collected: 10/17/17 08:56

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337552	11/16/17 12:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24461 MW-7

Lab Sample ID: 400-144723-131

Date Collected: 10/17/17 09:50

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337552	11/16/17 12:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24462 MW-8

Lab Sample ID: 400-144723-132

Date Collected: 10/17/17 10:46

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337552	11/16/17 12:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24463 MW-18

Lab Sample ID: 400-144723-133

Date Collected: 10/17/17 11:47

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 12:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24464 MW-7 DUP

Lab Sample ID: 400-144723-134

Date Collected: 10/17/17 09:50

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 12:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24465 FB-2

Lab Sample ID: 400-144723-135

Date Collected: 10/17/17 12:10

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:42	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24466 MW-13

Lab Sample ID: 400-144723-136

Date Collected: 10/17/17 09:40

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24467 MW-14

Lab Sample ID: 400-144723-137

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24468 MW-14 DUP

Lab Sample ID: 400-144723-138

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24469 MW-15

Lab Sample ID: 400-144723-139

Date Collected: 10/17/17 12:10

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24470 FB-1

Lab Sample ID: 400-144723-140

Date Collected: 10/17/17 12:30

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Client Sample ID: AX24471 MW-19

Lab Sample ID: 400-144723-141

Date Collected: 10/17/17 10:00

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24472 MW-20

Lab Sample ID: 400-144723-142

Date Collected: 10/17/17 11:05

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335319	11/02/17 19:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24473 EB-1

Lab Sample ID: 400-144723-143

Date Collected: 10/17/17 11:58

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:44	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335317	11/02/17 19:42	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	TAL SL

Client Sample ID: AX24474 MW-16

Lab Sample ID: 400-144723-144

Date Collected: 10/17/17 12:12

Matrix: Water

Date Received: 10/19/17 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			333869	10/25/17 08:47	LDE	TAL SL
Total/NA	Analysis	9315		1	337447	11/16/17 13:44	RTM	TAL SL
Total/NA	Prep	PrecSep_0			333872	10/25/17 09:10	LDE	TAL SL
Total/NA	Analysis	9320		1	335317	11/02/17 19:42	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	338143	11/20/17 14:25	EAW	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: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Rad

Prep Batch: 333869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-129	AX24459 MW-5	Total/NA	Water	PrecSep-21	
400-144723-130	AX24460 MW-6	Total/NA	Water	PrecSep-21	
400-144723-131	AX24461 MW-7	Total/NA	Water	PrecSep-21	
400-144723-132	AX24462 MW-8	Total/NA	Water	PrecSep-21	
400-144723-133	AX24463 MW-18	Total/NA	Water	PrecSep-21	
400-144723-134	AX24464 MW-7 DUP	Total/NA	Water	PrecSep-21	
400-144723-135	AX24465 FB-2	Total/NA	Water	PrecSep-21	
400-144723-136	AX24466 MW-13	Total/NA	Water	PrecSep-21	
400-144723-137	AX24467 MW-14	Total/NA	Water	PrecSep-21	
400-144723-138	AX24468 MW-14 DUP	Total/NA	Water	PrecSep-21	
400-144723-139	AX24469 MW-15	Total/NA	Water	PrecSep-21	
400-144723-140	AX24470 FB-1	Total/NA	Water	PrecSep-21	
400-144723-141	AX24471 MW-19	Total/NA	Water	PrecSep-21	
400-144723-142	AX24472 MW-20	Total/NA	Water	PrecSep-21	
400-144723-143	AX24473 EB-1	Total/NA	Water	PrecSep-21	
400-144723-144	AX24474 MW-16	Total/NA	Water	PrecSep-21	
MB 160-333869/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-333869/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-144723-130 MS	AX24460 MW-6	Total/NA	Water	PrecSep-21	
400-144723-130 MSD	AX24460 MW-6	Total/NA	Water	PrecSep-21	

Prep Batch: 333872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144723-129	AX24459 MW-5	Total/NA	Water	PrecSep_0	
400-144723-130	AX24460 MW-6	Total/NA	Water	PrecSep_0	
400-144723-131	AX24461 MW-7	Total/NA	Water	PrecSep_0	
400-144723-132	AX24462 MW-8	Total/NA	Water	PrecSep_0	
400-144723-133	AX24463 MW-18	Total/NA	Water	PrecSep_0	
400-144723-134	AX24464 MW-7 DUP	Total/NA	Water	PrecSep_0	
400-144723-135	AX24465 FB-2	Total/NA	Water	PrecSep_0	
400-144723-136	AX24466 MW-13	Total/NA	Water	PrecSep_0	
400-144723-137	AX24467 MW-14	Total/NA	Water	PrecSep_0	
400-144723-138	AX24468 MW-14 DUP	Total/NA	Water	PrecSep_0	
400-144723-139	AX24469 MW-15	Total/NA	Water	PrecSep_0	
400-144723-140	AX24470 FB-1	Total/NA	Water	PrecSep_0	
400-144723-141	AX24471 MW-19	Total/NA	Water	PrecSep_0	
400-144723-142	AX24472 MW-20	Total/NA	Water	PrecSep_0	
400-144723-143	AX24473 EB-1	Total/NA	Water	PrecSep_0	
400-144723-144	AX24474 MW-16	Total/NA	Water	PrecSep_0	
MB 160-333872/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-333872/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-144723-130 MS	AX24460 MW-6	Total/NA	Water	PrecSep_0	
400-144723-130 MSD	AX24460 MW-6	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-333869/1-A
Matrix: Water
Analysis Batch: 337552

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333869

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.002491	U	0.0303	0.0303	1.00	0.0769	pCi/L	10/25/17 08:47	11/16/17 12:29	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					10/25/17 08:47	11/16/17 12:29	1

Lab Sample ID: LCS 160-333869/2-A
Matrix: Water
Analysis Batch: 337552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333869

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.7	13.84		1.42	1.00	0.0740	pCi/L	88	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	94.7		40 - 110						

Lab Sample ID: 400-144723-130 MS
Matrix: Water
Analysis Batch: 337552

Client Sample ID: AX24460 MW-6
Prep Type: Total/NA
Prep Batch: 333869

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.317		15.7	14.60		1.49	1.00	0.0883	pCi/L	91	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	95.9		40 - 110								

Lab Sample ID: 400-144723-130 MSD
Matrix: Water
Analysis Batch: 337552

Client Sample ID: AX24460 MW-6
Prep Type: Total/NA
Prep Batch: 333869

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.317		15.7	14.17		1.45	1.00	0.0887	pCi/L	88	75 - 138	0.15	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	101		40 - 110										

QC Sample Results

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

TestAmerica Job ID: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-333872/1-A
Matrix: Water
Analysis Batch: 335319

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333872

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.04638	U	0.257	0.257	1.00	0.468	pCi/L	10/25/17 09:10	11/02/17 19:38	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					10/25/17 09:10	11/02/17 19:38	1
Y Carrier	84.5		40 - 110					10/25/17 09:10	11/02/17 19:38	1

Lab Sample ID: LCS 160-333872/2-A
Matrix: Water
Analysis Batch: 335319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333872

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	11.8	11.33		1.35	1.00	0.549	pCi/L	96	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	94.7		40 - 110						
Y Carrier	78.1		40 - 110						

Lab Sample ID: 400-144723-130 MS
Matrix: Water
Analysis Batch: 335319

Client Sample ID: AX24460 MW-6
Prep Type: Total/NA
Prep Batch: 333872

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.314	U	11.8	10.91		1.30	1.00	0.511	pCi/L	90	45 - 150
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	95.9		40 - 110								
Y Carrier	80.7		40 - 110								

Lab Sample ID: 400-144723-130 MSD
Matrix: Water
Analysis Batch: 335319

Client Sample ID: AX24460 MW-6
Prep Type: Total/NA
Prep Batch: 333872

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.314	U	11.8	10.41		1.23	1.00	0.471	pCi/L	85	45 - 150	0.20	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	101		40 - 110										
Y Carrier	82.6		40 - 110										

Chain of Custody Record

Client Information		Lab Pmt: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Alabama Power General Test Laboratory		Ben Rothschild/Anthony Goggins		400-56525-24537.1	
Address: 744 County Rd 87 GSC #8		Phone: Keith Kornegay		COC No:	
City: Callera		E-Mail: cheyenne.whitmire@testamericainc.com		400-56525-24537.1	
State, Zip: AL, 35040		Due Date Requested: 11/10/2017		Page: Page 1 of 1	
Phone: 205-664-6004		TAT Requested (days):		Job #:	
Email: k.korne@alpower.com		PO #:			
Project Name: Gorgas Landfill		WO #:			
CCR: 40007143		Project #:			
Site: Gorgas Landfill		SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=soil, G=gas, L=leachate, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Preservation Code:	Special Instructions/Note:	Total Number of Containers	Preservation Codes:
AX24459	10/17/17	0758	G	Water	X	X	D		1	MW-5
AX24460	10/17/17	0856	G	Water	Y	X			3	MW-6
AX24461	10/17/17	0950	G	Water	X	X			1	MW-7
AX24462	10/17/17	1046	G	Water	X	X			1	MW-8
AX24463	10/17/17	1147	G	Water	X	X			1	MW-18
AX24464	10/17/17	0950	G	Water	X	X			1	MW-7DUP (Sample Duplicate)
AX24465	10/17/17	1210	G	Water	X	X			1	FB-2 (Field Blank)
AX24466	10/17/17	0940	G	Water	X	X			1	MW-13

Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological	
Deliverable Requested: I, II, III, IV, Other (specify)	
Empty Kit Relinquished by:	Date:
Relinquished by: Keith Kornegay	Date/Time: 10/17/2017 12:00
Relinquished by:	Date/Time: 10.19.17
Relinquished by:	Date/Time:
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:

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:	
Method of Shipment:	Date/Time: 10/19/17 0937
Received by:	Date/Time:
Received by:	Date/Time:
Received by:	Date/Time:
Cooler Temperature(s) °C and Other Remarks:	



Chain of Custody Record

Client Information Client Contact: Ben Rothschild/Nick Pitts Phone: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s): COC No: 400-56525-24537.1 Page: Page 1 of 1 Job #:					
Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Callera State, Zip: AL, 35040 Phone: 205-664-6004 Email: fkkorne@supheri-o.com		Due Date Requested: 11/10/2017 TAT Requested (days): PO #: 40007143 WO #: 40007143 Project #: 40007143 SSO/WK: Gorgas Landfill		Analysis Requested 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: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)					
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Special Instructions/Note:	Total Number of containers	
								Preservation Code:	
AX24467	10/17/17	1105	G	Water	X	X	915, Ra226, 9120, Ra228, Ra226Ra228, G, FP	1	MW-14
AX24468	10/17/17	1105	G	Water	X	X		1	MW-14 DUP (Sample Duplicate)
AX24469	10/17/17	1210	G	Water	X	X		1	MW-15
AX24470	10/17/17	1230	G	Water	X	X		1	FB-1 (Field Blank)
AX24471	10/17/17	1000	G	Water	X	X		1	MW-19
AX24472	10/17/17	1105	G	Water	X	X		1	MW-20
AX24473	10/17/17	1158	G	Water	X	X		1	EB-1 (Equipment Blank)
AX24474	10/17/17	1212	G	Water	X	X		1	MW-16
Possible Hazard Identification <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: Relinquished by: Keith Korneggy		Date/Time: 10/18/2017 12:00		Date/Time: 10/19/17 0931		Date/Time:		Method of Shipment:	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:	



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-144723-9
SDG Number: Plant Gorgas CCB Landfills

Login Number: 144723

List Number: 1

Creator: Siddoway, Benjamin

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	18.1°C,19.2°C,19.4°C,20.4°C rads; 3.3°C,3.3°C IR7; 18.3°C,18.7°C rads; 0.0°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 <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: 400-144723-9
 SDG: Plant Gorgas CCB Landfills

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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

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
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	11-30-17 *
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	12-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	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: 400-144723-9
SDG: Plant Gorgas CCB Landfills

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	02-21-18
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



Chain of Custody Groundwater

APC General Testing Laboratory
General Service Complex Building 8

- Field Complete
- Lab Complete

Lab ETA 10/17/2017 14:30

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="Ben Rothschadl"/>	Location	<input type="text" value="Gorgas Landfill"/>
Analysis Requested	<input type="text" value="Bottle 1 (1L): Radiological"/>		
Comments	<input type="text" value="No temperature preservation requirement."/>		

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/17/2017	09:40	1	Groundwater		AX24466
MW-14	10/17/2017	11:05	1	Groundwater		AX24467
MW-14 DUP	10/17/2017	11:05	1	Sample Duplicate		AX24468
MW-15	10/17/2017	12:10	1	Groundwater		AX24469
FB-1	10/17/2017	12:30	1	Field Blank		AX24470

Relinquished By	Received By	Date/Time
	Keith Kornegay <small>Digitally signed by Keith Kornegay DN: cn=Keith Kornegay, o=Alabama Power Company, ou=Environmental Affairs, email=kkornegay@southernco.com, c=US Date: 2017.10.18 10:56:08 -0500</small>	10/18/2017 10:56

SmarTroll ID <input type="text" value="5151-26193-1-1"/>	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID <input type="text" value="3901-20010-2-2"/>	
Cooler Temp <input type="text" value="NA"/>	
Thermometer ID <input type="text" value="NA"/>	pH Strip ID <input type="text" value="6153-32040-10-7"/>

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

 Alabama Power



Sample Group : WMWGORLF_1127

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:

Supervision:

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



Anions

Gorgas Landfill

WMWGORLF_1127

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 anion samples were outsourced to Test America, Pensacola for analysis. Below is the case narrative provided by Test America.

Job Narrative 400-146328-1 General Chemistry

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX26581 MW-8 (400-146328-15). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX26567 MW-5 (400-146328-1), AX26568 MW-6 (400-146328-2), AX26569 MW-20 (400-146328-3), AX26570 MW-19 (400-146328-4), AX26571 MW-19 DUP (400-146328-5), AX26572 MW-18 (400-146328-6), AX26574 MW-16 (400-146328-8), AX26575 MW-15 (400-146328-9), AX26577 MW-14 (400-146328-11), AX26578 MW-14 DUP (400-146328-12), AX26579 MW-13 (400-146328-13), AX26580 MW-7 (400-146328-14) and AX26581 MW-8 (400-146328-15). Initial dilutions were run based on historical data. Elevated reporting limits (RLs) are provided.



Metals ICP

Gorgas Landfill

WMWGORLF_1127

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>
AX26567	20171121K	WMWGORLF_1127
AX26568	20171121K	WMWGORLF_1127
AX26569	20171121K	WMWGORLF_1127
AX26570	20171121K	WMWGORLF_1127
AX26571	20171121K	WMWGORLF_1127
AX26572	20171121K	WMWGORLF_1127
AX26573	20171121K	WMWGORLF_1127
AX26574	20171121K	WMWGORLF_1127
AX26575	20171121K	WMWGORLF_1127
AX26576	20171121K	WMWGORLF_1127
AX26577	20171121BK & 20171129BK	WMWGORLF_1127
AX26578	20171121BK & 20171129BK	WMWGORLF_1127
AX26579	20171121BK & 20171129BK	WMWGORLF_1127
AX26580	20171121BK & 20171129BK	WMWGORLF_1127
AX26581	20171121BK & 20171129BK	WMWGORLF_1127
AX26582	20171121BK & 20171129BK	WMWGORLF_1127

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

General Quality Control Procedures:

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



- All laboratory control sample criteria were met except for the following; Ca LCS did not meet acceptance criteria on 20171121BK. Ca was reanalyzed and reported with all passing criteria in batch 20171129BK.
- 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 dilution to compensate for potential matrix effects. The following samples were further 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>
AX26567	Calcium	x10
AX26568	Calcium	x100
AX26569	Calcium	x10
AX26570	Calcium	x10
AX26571	Calcium	x10
AX26572	Calcium	x10
AX26574	Calcium	x10
AX26575	Calcium	x10
AX26577	Calcium	x10
AX26578	Calcium	x10
AX26579	Calcium	x10
AX26580	Calcium	x10
AX26581	Calcium	x10

8. The raw data results include results corrected for dilution.



TDS

Gorgas Landfill

WMWGORLF_1127

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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>
AX26567	606946	WMWGORLF_1127
AX26568	606946	WMWGORLF_1127
AX26569	606946	WMWGORLF_1127
AX26570	606946	WMWGORLF_1127
AX26571	606947	WMWGORLF_1127
AX26572	606947	WMWGORLF_1127
AX26573	606947	WMWGORLF_1127
AX26574	606947	WMWGORLF_1127
AX26575	606947	WMWGORLF_1127
AX26576	606947	WMWGORLF_1127
AX26577	606947	WMWGORLF_1127
AX26578	606947	WMWGORLF_1127
AX26579	606947	WMWGORLF_1127
AX26580	606947	WMWGORLF_1127
AX26581	607126	WMWGORLF_1127
AX26582	607126	WMWGORLF_1127

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 AX26573, AX26576 and AX26582 which did not meet the 2.5 mg requirement.

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: 16-Nov-17
Customer ID:
Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX26567

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0377	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		10	1	5	368	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	3930	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	8.1	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.37	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		75	110	380	2200	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
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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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX26567

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AX26567

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26570	Solids, Dissolved	mg/L	0.0000	25			3750	43.0	40 to 60	0.536	5

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CC:

Alabama Power General Test Laboratory
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Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX26568

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0772	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		100	10	50	367	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	3280	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	3.5	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.14	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1800	mg/L

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Expiration: June 30, 2018

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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: WMWGORLF
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX26568

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AX26568

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26570	Solids, Dissolved	mg/L	0.0000	25			3750	43.0	40 to 60	0.536	5

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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
Sample Date: 15-Nov-17
Customer ID:
Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX26569

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	0.101	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		10	1	5	334	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	2600	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	6.3	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.13	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1500	mg/L

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX26569

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AX26569

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26570	Solids, Dissolved	mg/L	0.0000	25			3750	43.0	40 to 60	0.536	5

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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
Sample Date: 15-Nov-17
Customer ID:
Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX26570

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0348	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		10	1	5	371	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	3710	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	2.9	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.34	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		75	110	380	2100	mg/L

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Comments: Test America, Pensacola NELAP ID: E81010

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 744 County Road 87, GSC#8
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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX26570

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AX26570

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26570	Solids, Dissolved	mg/L	0.0000	25			3750	43.0	40 to 60		0.536 5

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CC:

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Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-19 Dup

Laboratory ID Number: AX26571

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0337	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		10	1	5	361	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	3720	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	2.7	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.34	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		75	110	380	2100	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: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-19 Dup

Laboratory ID Number: AX26571

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20

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Expiration: June 30, 2018

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-19 Dup

Laboratory ID Number: AX26571

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26580	Solids, Dissolved	mg/L	0.0000	25			2510	43.0	40 to 60	1.01	5

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Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX26572

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0313	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		10	1	5	318	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	3170	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	3.6	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.31	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1900	mg/L

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX26572

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20

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Expiration: June 30, 2018

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AX26572

Sample	Analysis	Units	MB	MB	Limit	Spike	LFM	Sample	LFB	Rec	Prec	Prec	Limit	
								Duplicate	LFB	Limit	Rec	Limit	Prec	Limit
AX26580	Solids, Dissolved	mg/L	0.0000	25				2510	43.0	40 to 60			1.01	5

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Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX26573

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		2	0.10	0.5	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		1	1.40	5.00	U <1.4	mg/L

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Expiration: June 30, 2018

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX26573

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX26573

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26580	Solids, Dissolved	mg/L	0.0000	25			2510	43.0	40 to 60		1.01
											5

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Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX26574

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0440	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		10	1	5	287	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		125	2400	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	4.3	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.17	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1200	mg/L

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX26574

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AX26574

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26580	Solids, Dissolved	mg/L	0.0000	25			2510	43.0	40 to 60	1.01	5

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Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX26575

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0483	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		10	1	5	254	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		125	2620	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	J 1.4	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.35	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1500	mg/L

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Expiration: June 30, 2018

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX26575

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	LFB	LFB Limit	Rec	Rec Limit	Prec	Prec Limit
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 15-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AX26575

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26580	Solids, Dissolved	mg/L	0.0000	25			2510	43.0	40 to 60	1.01	5

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Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX26576

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	11/21/2017	EPA 200.7		2	0.10	0.5	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		1	1.40	5.00	U <1.4	mg/L

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX26576

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26576	Calcium, Total	mg/L	-0.00337	0.22	5.00	4.79	4.57	4.61	4.25 to 5.75	95.8	70 to 130	4.71	20
AX26576	Boron, Total	mg/L	0.00132	0.044	1.00	0.939	0.933	0.916	0.85 to 1.15	93.9	70 to 130	0.695	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFFB
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AX26576

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26580	Solids, Dissolved	mg/L	0.0000	25			2510	43.0	40 to 60	1.01	5

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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:

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Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX26577

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0568	mg/L
* Calcium, Total	HRG	11/29/2017	EPA 200.7		10	1	5	313	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	3160	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	J 1.9	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.25	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1700	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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX26577

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26582	Calcium, Total	mg/L	-0.0161	0.22	5.00	4.77	4.66	4.69	4.25 to 5.75	95.5	70 to 130	2.43	20
AX26582	Boron, Total	mg/L	0.00213	0.044	1.00	0.916	0.930	0.912	0.85 to 1.15	91.6	70 to 130	1.56	20

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AX26577

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26580	Solids, Dissolved	mg/L	0.0000	25			2510	43.0	40 to 60	1.01	5

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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



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AX26578

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0460	mg/L
* Calcium, Total	HRG	11/29/2017	EPA 200.7		10	1	5	308	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	3190	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	2.0	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.25	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1800	mg/L

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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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AX26578

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26582	Calcium, Total	mg/L	-0.0161	0.22	5.00	4.77	4.66	4.69	4.25 to 5.75	95.5	70 to 130	2.43	20
AX26582	Boron, Total	mg/L	0.00213	0.044	1.00	0.916	0.930	0.912	0.85 to 1.15	91.6	70 to 130	1.56	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-14 Dup

Laboratory ID Number: AX26578

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26580	Solids, Dissolved	mg/L	0.0000	25			2510	43.0	40 to 60	1.01	5

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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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX26579

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0554	mg/L
* Calcium, Total	HRG	11/29/2017	EPA 200.7		10	1	5	296	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	3150	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	2.4	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.20	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1800	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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX26579

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26582	Calcium, Total	mg/L	-0.0161	0.22	5.00	4.77	4.66	4.69	4.25 to 5.75	95.5	70 to 130	2.43	20
AX26582	Boron, Total	mg/L	0.00213	0.044	1.00	0.916	0.930	0.912	0.85 to 1.15	91.6	70 to 130	1.56	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AX26579

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX26580	Solids, Dissolved	mg/L	0.0000	25			2510	43.0	40 to 60	1.01	5

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Expiration: June 30, 2018

Comments: Test America, Pensacola NELAP ID: E81010

CC:

Alabama Power General Test Laboratory
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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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX26580

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0644	mg/L
* Calcium, Total	HRG	11/29/2017	EPA 200.7		10	1	5	299	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/22/2017	SM 2540C		1		250	2460	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	35	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.18	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1300	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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX26580

Sample	Analysis	Units	MB				LFB			Rec		Prec	
			MB	Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	
AX26582	Calcium, Total	mg/L	-0.0161	0.22	5.00	4.77	4.66	4.69	4.25 to 5.75	95.5	70 to 130	2.43	20
AX26582	Boron, Total	mg/L	0.00213	0.044	1.00	0.916	0.930	0.912	0.85 to 1.15	91.6	70 to 130	1.56	20

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Laboratory certification ID: E571114

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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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AX26580

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26580	Solids, Dissolved	mg/L	0.0000	25			2510	43.0	40 to 60	1.01	5

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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



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX26581

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	J 0.0675	mg/L
* Calcium, Total	HRG	11/29/2017	EPA 200.7		10	1	5	308	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/28/2017	SM 2540C		1		250	2650	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		10	6.00	20	130	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	0.22	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		60	84.0	300	1400	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

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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: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX26581

Sample	Analysis	Units	MB	MB				LFB		Rec		Prec	
				Limit	Spike	MS	MSD	LFB	Limit	Rec	Limit	Prec	Limit
AX26582	Boron, Total	mg/L	0.00213	0.044	1.00	0.916	0.930	0.912	0.85 to 1.15	91.6	70 to 130	1.56	20
AX26582	Calcium, Total	mg/L	-0.0161	0.22	5.00	4.77	4.66	4.69	4.25 to 5.75	95.5	70 to 130	2.43	20

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 FAX (205) 257-1654

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLF
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AX26581

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Prec	
AX26848	Solids, Dissolved	mg/L	8.00	25			41600	56.0	40 to 60	0.716	5

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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



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFEB
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX26582

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Boron, Total	HRG	11/21/2017	EPA 200.7		2	0.02	0.1	U Not Detected	mg/L
* Calcium, Total	HRG	11/29/2017	EPA 200.7		2	0.10	0.5	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CES	11/28/2017	SM 2540C		1		25	U Not Detected	mg/L
* Chloride, Total, by Test America	SGC	12/14/2017	SM 4500 Cl_E		1	0.60	2.00	U <0.60	mg/L
* Fluoride, Total, by Test America	SGC	12/14/2017	SM 4500 F_C		1	0.032	0.10	U <0.032	mg/L
* Sulfate, Total, by Test America	SGC	12/14/2017	SM 4500 SO4_E		1	1.40	5.00	U <1.4	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: WMWGORLFEB
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX26582

Sample	Analysis	Units	MB		MS	MSD	LFB	LFB		Rec		Prec	Limit
			Limit	Spike				Limit	Rec	Limit	Prec		
AX26582	Calcium, Total	mg/L	-0.0161	0.22	5.00	4.77	4.66	4.69	4.25 to 5.75	95.5	70 to 130	2.43	20
AX26582	Boron, Total	mg/L	0.00213	0.044	1.00	0.916	0.930	0.912	0.85 to 1.15	91.6	70 to 130	1.56	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2018

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORLFEB
 Sample Date: 16-Nov-17
 Customer ID:
 Delivery Date: 17-Nov-17

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AX26582

Sample	Analysis	Units	MB	MB	Spike	LFM	Sample	LFB	Rec	Prec	
			Limit	Limit			Duplicate	LFB	Limit	Limit	
AX26848	Solids, Dissolved	mg/L	8.00	25			41600	56.0	40 to 60	0.716	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

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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:

Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
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 11/16/2017 19:00

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 (500 mL): Metals, Bottle 2 (500 mL): TDS, Bottle 3 (250 mL): Anions
Comments	SmarTroll ID:4787-24221-2-2 was used while collecting samples at MW-14, MW-13, MW-7, and MW-8 Groundwater Samples secured in APCO Shipping Lab located in GSC Building 8. Secured samples at 1900 on 16NOV17. Incorrect time listed for MW-14Dup, correct on the bottle. Samples received from shipping room. All anions outsourced to TA

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-20	11/15/2017	11:22	3	Groundwater		AX26569
MW-19	11/15/2017	12:18	3	Groundwater		AX26570
MW-19 DUP	11/15/2017	12:18	3	Sample Duplicate		AX26571
MW-18	11/15/2017	13:20	3	Groundwater		AX26572
FB-1	11/15/2017	13:45	3	Field Blank		AX26573
MW-16	11/15/2017	14:23	3	Groundwater		AX26574
MW-15	11/15/2017	15:12	3	Groundwater		AX26575
FB-2	11/16/2017	12:50	3	Field Blank		AX26576
MW-14	11/16/2017	12:56	3	Groundwater		AX26577
MW-14 DUP	11/16/2017	12:56	3	Sample Duplicate		AX26578
MW-13	11/16/2017	13:52	3	Groundwater		AX26579
MW-7	11/16/2017	14:50	3	Groundwater		AX26580
MW-8	11/16/2017	15:41	3	Groundwater		AX26581
EB-1	11/16/2017	16:05	3	Equipment Blank		AX26582

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: 2017.11.17 08:32:46 -06'00'</small>	11/17/2017 08:32

SmarTroll ID	5151-26193-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	3901-20010-2-2	Cooler Temp	0.0 degrees C
		Thermometer ID	5408-27568-2-2
		pH Strip ID	5881-30147-10-1

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: 400-146328-1

TestAmerica SDG: Gorgas Landfill Catch-up (9)

Client Project/Site: CCR Plant Gorgas

For:

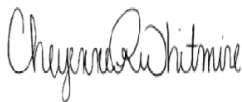
Alabama Power General Test Laboratory

744 County Rd 87

GSC #8

Calera, Alabama 35040

Attn: Sarah Copeland



Authorized for release by:

12/13/2017 5:21:54 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

Job ID: 400-146328-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-146328-1

General Chemistry

Method(s) SM 4500 Cl- E: The following sample was diluted to bring the concentration of target analytes within the calibration range: AX26581 MW-8 (400-146328-15). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: AX26567 MW-5 (400-146328-1), AX26568 MW-6 (400-146328-2), AX26569 MW-20 (400-146328-3), AX26570 MW-19 (400-146328-4), AX26571 MW-19 DUP (400-146328-5), AX26572 MW-18 (400-146328-6), AX26574 MW-16 (400-146328-8), AX26575 MW-15 (400-146328-9), AX26577 MW-14 (400-146328-11), AX26578 MW-14 DUP (400-146328-12), AX26579 MW-13 (400-146328-13), AX26580 MW-7 (400-146328-14) and AX26581 MW-8 (400-146328-15). Initial dilutions were run based on historical data. Elevated reporting limits (RLs) are provided.



Detection Summary

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

TestAmerica Job ID: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26567 MW-5

Lab Sample ID: 400-146328-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.37		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2200		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26568 MW-6

Lab Sample ID: 400-146328-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.5		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	1800		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26569 MW-20

Lab Sample ID: 400-146328-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.3		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	1500		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26570 MW-19

Lab Sample ID: 400-146328-4

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	0.34		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2100		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26571 MW-19 DUP

Lab Sample ID: 400-146328-5

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	0.34		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2100		380	110	mg/L	75		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26572 MW-18

Lab Sample ID: 400-146328-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		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	1900		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26573 FB-1

Lab Sample ID: 400-146328-7

No Detections.

Client Sample ID: AX26574 MW-16

Lab Sample ID: 400-146328-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.3		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		300	84	mg/L	60		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: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26575 MW-15

Lab Sample ID: 400-146328-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4	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	1500		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26576 FB-2

Lab Sample ID: 400-146328-10

No Detections.

Client Sample ID: AX26577 MW-14

Lab Sample ID: 400-146328-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9	J	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1700		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26578 MW-14 DUP

Lab Sample ID: 400-146328-12

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	0.25		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1800		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26579 MW-13

Lab Sample ID: 400-146328-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4		2.0	0.60	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		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26580 MW-7

Lab Sample ID: 400-146328-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	35		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	1300		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26581 MW-8

Lab Sample ID: 400-146328-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	130		20	6.0	mg/L	10		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1400		300	84	mg/L	60		SM 4500 SO4 E	Total/NA

Client Sample ID: AX26582 EB-1

Lab Sample ID: 400-146328-16

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: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

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: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-146328-1	AX26567 MW-5	Water	11/16/17 15:02	11/21/17 08:06
400-146328-2	AX26568 MW-6	Water	11/16/17 15:42	11/21/17 08:06
400-146328-3	AX26569 MW-20	Water	11/15/17 11:22	11/21/17 08:06
400-146328-4	AX26570 MW-19	Water	11/15/17 12:18	11/21/17 08:06
400-146328-5	AX26571 MW-19 DUP	Water	11/15/17 12:18	11/21/17 08:06
400-146328-6	AX26572 MW-18	Water	11/15/17 13:20	11/21/17 08:06
400-146328-7	AX26573 FB-1	Water	11/15/17 13:45	11/21/17 08:06
400-146328-8	AX26574 MW-16	Water	11/15/17 14:23	11/21/17 08:06
400-146328-9	AX26575 MW-15	Water	11/15/17 15:12	11/21/17 08:06
400-146328-10	AX26576 FB-2	Water	11/16/17 12:50	11/21/17 08:06
400-146328-11	AX26577 MW-14	Water	11/16/17 12:56	11/21/17 08:06
400-146328-12	AX26578 MW-14 DUP	Water	11/16/17 12:56	11/21/17 08:06
400-146328-13	AX26579 MW-13	Water	11/16/17 13:52	11/21/17 08:06
400-146328-14	AX26580 MW-7	Water	11/16/17 14:50	11/21/17 08:06
400-146328-15	AX26581 MW-8	Water	11/16/17 15:41	11/21/17 08:06
400-146328-16	AX26582 EB-1	Water	11/16/17 16:05	11/21/17 08:06

Client Sample Results

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

TestAmerica Job ID: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26567 MW-5

Lab Sample ID: 400-146328-1

Date Collected: 11/16/17 15:02

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.1		2.0	0.60	mg/L			11/29/17 14:24	1
Fluoride	0.37		0.10	0.032	mg/L			12/07/17 07:43	1
Sulfate	2200		380	110	mg/L			11/29/17 09:54	75

Client Sample ID: AX26568 MW-6

Lab Sample ID: 400-146328-2

Date Collected: 11/16/17 15:42

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.5		2.0	0.60	mg/L			11/29/17 14:24	1
Fluoride	0.14		0.10	0.032	mg/L			12/07/17 07:46	1
Sulfate	1800		300	84	mg/L			11/29/17 09:54	60

Client Sample ID: AX26569 MW-20

Lab Sample ID: 400-146328-3

Date Collected: 11/15/17 11:22

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.3		2.0	0.60	mg/L			11/29/17 14:24	1
Fluoride	0.13		0.10	0.032	mg/L			12/07/17 07:48	1
Sulfate	1500		300	84	mg/L			11/29/17 09:54	60

Client Sample ID: AX26570 MW-19

Lab Sample ID: 400-146328-4

Date Collected: 11/15/17 12:18

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.9		2.0	0.60	mg/L			11/29/17 14:24	1
Fluoride	0.34		0.10	0.032	mg/L			12/07/17 07:50	1
Sulfate	2100		380	110	mg/L			11/29/17 09:54	75

Client Sample ID: AX26571 MW-19 DUP

Lab Sample ID: 400-146328-5

Date Collected: 11/15/17 12:18

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		2.0	0.60	mg/L			11/29/17 14:24	1
Fluoride	0.34		0.10	0.032	mg/L			12/07/17 07:53	1
Sulfate	2100		380	110	mg/L			11/29/17 09:58	75

Client Sample Results

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

TestAmerica Job ID: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26572 MW-18

Lab Sample ID: 400-146328-6

Date Collected: 11/15/17 13:20

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		2.0	0.60	mg/L			11/29/17 14:24	1
Fluoride	0.31		0.10	0.032	mg/L			12/07/17 07:55	1
Sulfate	1900		300	84	mg/L			11/29/17 09:58	60

Client Sample ID: AX26573 FB-1

Lab Sample ID: 400-146328-7

Date Collected: 11/15/17 13:45

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			11/29/17 14:27	1
Fluoride	<0.032		0.10	0.032	mg/L			12/07/17 07:59	1
Sulfate	<1.4		5.0	1.4	mg/L			11/29/17 09:50	1

Client Sample ID: AX26574 MW-16

Lab Sample ID: 400-146328-8

Date Collected: 11/15/17 14:23

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.3		2.0	0.60	mg/L			11/29/17 14:27	1
Fluoride	0.17		0.10	0.032	mg/L			12/07/17 08:14	1
Sulfate	1200		300	84	mg/L			11/29/17 09:58	60

Client Sample ID: AX26575 MW-15

Lab Sample ID: 400-146328-9

Date Collected: 11/15/17 15:12

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	J	2.0	0.60	mg/L			11/29/17 14:27	1
Fluoride	0.35		0.10	0.032	mg/L			12/07/17 08:17	1
Sulfate	1500		300	84	mg/L			11/29/17 09:58	60

Client Sample ID: AX26576 FB-2

Lab Sample ID: 400-146328-10

Date Collected: 11/16/17 12:50

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			11/29/17 14:27	1
Fluoride	<0.032		0.10	0.032	mg/L			12/07/17 07:36	1
Sulfate	<1.4		5.0	1.4	mg/L			11/29/17 09:50	1

Client Sample ID: AX26577 MW-14

Lab Sample ID: 400-146328-11

Date Collected: 11/16/17 12:56

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9	J	2.0	0.60	mg/L			11/29/17 14:27	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26577 MW-14

Lab Sample ID: 400-146328-11

Date Collected: 11/16/17 12:56

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.25		0.10	0.032	mg/L			12/07/17 08:19	1
Sulfate	1700		300	84	mg/L			11/29/17 10:03	60

Client Sample ID: AX26578 MW-14 DUP

Lab Sample ID: 400-146328-12

Date Collected: 11/16/17 12:56

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		2.0	0.60	mg/L			11/29/17 14:27	1
Fluoride	0.25		0.10	0.032	mg/L			12/07/17 08:22	1
Sulfate	1800		300	84	mg/L			11/29/17 10:03	60

Client Sample ID: AX26579 MW-13

Lab Sample ID: 400-146328-13

Date Collected: 11/16/17 13:52

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.4		2.0	0.60	mg/L			11/29/17 14:27	1
Fluoride	0.20		0.10	0.032	mg/L			12/07/17 08:24	1
Sulfate	1800		300	84	mg/L			11/29/17 10:03	60

Client Sample ID: AX26580 MW-7

Lab Sample ID: 400-146328-14

Date Collected: 11/16/17 14:50

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35		2.0	0.60	mg/L			11/29/17 14:27	1
Fluoride	0.18		0.10	0.032	mg/L			12/07/17 08:27	1
Sulfate	1300		300	84	mg/L			11/29/17 10:03	60

Client Sample ID: AX26581 MW-8

Lab Sample ID: 400-146328-15

Date Collected: 11/16/17 15:41

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		20	6.0	mg/L			11/29/17 14:33	10
Fluoride	0.22		0.10	0.032	mg/L			12/07/17 08:29	1
Sulfate	1400		300	84	mg/L			11/29/17 10:05	60

Client Sample ID: AX26582 EB-1

Lab Sample ID: 400-146328-16

Date Collected: 11/16/17 16:05

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			11/29/17 14:27	1
Fluoride	<0.032		0.10	0.032	mg/L			12/07/17 08:08	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26582 EB-1

Lab Sample ID: 400-146328-16

Date Collected: 11/16/17 16:05

Matrix: Water

Date Received: 11/21/17 08:06

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			11/29/17 09:50	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Definitions/Glossary

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

TestAmerica Job ID: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

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.

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: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26567 MW-5

Date Collected: 11/16/17 15:02

Date Received: 11/21/17 08:06

Lab Sample ID: 400-146328-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 07:43	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	377674	11/29/17 09:54	JLB	TAL PEN

Client Sample ID: AX26568 MW-6

Date Collected: 11/16/17 15:42

Date Received: 11/21/17 08:06

Lab Sample ID: 400-146328-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 07:46	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 09:54	JLB	TAL PEN

Client Sample ID: AX26569 MW-20

Date Collected: 11/15/17 11:22

Date Received: 11/21/17 08:06

Lab Sample ID: 400-146328-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 07:48	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 09:54	JLB	TAL PEN

Client Sample ID: AX26570 MW-19

Date Collected: 11/15/17 12:18

Date Received: 11/21/17 08:06

Lab Sample ID: 400-146328-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 07:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	377674	11/29/17 09:54	JLB	TAL PEN

Client Sample ID: AX26571 MW-19 DUP

Date Collected: 11/15/17 12:18

Date Received: 11/21/17 08:06

Lab Sample ID: 400-146328-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 07:53	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		75	377674	11/29/17 09:58	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26572 MW-18

Lab Sample ID: 400-146328-6

Date Collected: 11/15/17 13:20

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:24	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 07:55	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 09:58	JLB	TAL PEN

Client Sample ID: AX26573 FB-1

Lab Sample ID: 400-146328-7

Date Collected: 11/15/17 13:45

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 07:59	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	377674	11/29/17 09:50	JLB	TAL PEN

Client Sample ID: AX26574 MW-16

Lab Sample ID: 400-146328-8

Date Collected: 11/15/17 14:23

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 08:14	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 09:58	JLB	TAL PEN

Client Sample ID: AX26575 MW-15

Lab Sample ID: 400-146328-9

Date Collected: 11/15/17 15:12

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 08:17	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 09:58	JLB	TAL PEN

Client Sample ID: AX26576 FB-2

Lab Sample ID: 400-146328-10

Date Collected: 11/16/17 12:50

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 07:36	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	377674	11/29/17 09:50	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26577 MW-14

Lab Sample ID: 400-146328-11

Date Collected: 11/16/17 12:56

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 08:19	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 10:03	JLB	TAL PEN

Client Sample ID: AX26578 MW-14 DUP

Lab Sample ID: 400-146328-12

Date Collected: 11/16/17 12:56

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 08:22	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 10:03	JLB	TAL PEN

Client Sample ID: AX26579 MW-13

Lab Sample ID: 400-146328-13

Date Collected: 11/16/17 13:52

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 08:24	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 10:03	JLB	TAL PEN

Client Sample ID: AX26580 MW-7

Lab Sample ID: 400-146328-14

Date Collected: 11/16/17 14:50

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 08:27	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 10:03	JLB	TAL PEN

Client Sample ID: AX26581 MW-8

Lab Sample ID: 400-146328-15

Date Collected: 11/16/17 15:41

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		10	377726	11/29/17 14:33	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 08:29	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		60	377674	11/29/17 10:05	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

Client Sample ID: AX26582 EB-1

Lab Sample ID: 400-146328-16

Date Collected: 11/16/17 16:05

Matrix: Water

Date Received: 11/21/17 08:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	377726	11/29/17 14:27	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	378735	12/07/17 08:08	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	377674	11/29/17 09:50	JLB	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: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

General Chemistry

Analysis Batch: 377674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-146328-1	AX26567 MW-5	Total/NA	Water	SM 4500 SO4 E	
400-146328-2	AX26568 MW-6	Total/NA	Water	SM 4500 SO4 E	
400-146328-3	AX26569 MW-20	Total/NA	Water	SM 4500 SO4 E	
400-146328-4	AX26570 MW-19	Total/NA	Water	SM 4500 SO4 E	
400-146328-5	AX26571 MW-19 DUP	Total/NA	Water	SM 4500 SO4 E	
400-146328-6	AX26572 MW-18	Total/NA	Water	SM 4500 SO4 E	
400-146328-7	AX26573 FB-1	Total/NA	Water	SM 4500 SO4 E	
400-146328-8	AX26574 MW-16	Total/NA	Water	SM 4500 SO4 E	
400-146328-9	AX26575 MW-15	Total/NA	Water	SM 4500 SO4 E	
400-146328-10	AX26576 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-146328-11	AX26577 MW-14	Total/NA	Water	SM 4500 SO4 E	
400-146328-12	AX26578 MW-14 DUP	Total/NA	Water	SM 4500 SO4 E	
400-146328-13	AX26579 MW-13	Total/NA	Water	SM 4500 SO4 E	
400-146328-14	AX26580 MW-7	Total/NA	Water	SM 4500 SO4 E	
400-146328-15	AX26581 MW-8	Total/NA	Water	SM 4500 SO4 E	
400-146328-16	AX26582 EB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-377674/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-377674/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-377674/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-146328-10 MS	AX26576 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-146328-10 MSD	AX26576 FB-2	Total/NA	Water	SM 4500 SO4 E	
400-146328-16 MS	AX26582 EB-1	Total/NA	Water	SM 4500 SO4 E	
400-146328-16 MSD	AX26582 EB-1	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 377726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-146328-1	AX26567 MW-5	Total/NA	Water	SM 4500 Cl- E	
400-146328-2	AX26568 MW-6	Total/NA	Water	SM 4500 Cl- E	
400-146328-3	AX26569 MW-20	Total/NA	Water	SM 4500 Cl- E	
400-146328-4	AX26570 MW-19	Total/NA	Water	SM 4500 Cl- E	
400-146328-5	AX26571 MW-19 DUP	Total/NA	Water	SM 4500 Cl- E	
400-146328-6	AX26572 MW-18	Total/NA	Water	SM 4500 Cl- E	
400-146328-7	AX26573 FB-1	Total/NA	Water	SM 4500 Cl- E	
400-146328-8	AX26574 MW-16	Total/NA	Water	SM 4500 Cl- E	
400-146328-9	AX26575 MW-15	Total/NA	Water	SM 4500 Cl- E	
400-146328-10	AX26576 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-146328-11	AX26577 MW-14	Total/NA	Water	SM 4500 Cl- E	
400-146328-12	AX26578 MW-14 DUP	Total/NA	Water	SM 4500 Cl- E	
400-146328-13	AX26579 MW-13	Total/NA	Water	SM 4500 Cl- E	
400-146328-14	AX26580 MW-7	Total/NA	Water	SM 4500 Cl- E	
400-146328-15	AX26581 MW-8	Total/NA	Water	SM 4500 Cl- E	
400-146328-16	AX26582 EB-1	Total/NA	Water	SM 4500 Cl- E	
MB 400-377726/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-377726/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-377726/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-146328-10 MS	AX26576 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-146328-10 MSD	AX26576 FB-2	Total/NA	Water	SM 4500 Cl- E	
400-146328-16 MS	AX26582 EB-1	Total/NA	Water	SM 4500 Cl- E	
400-146328-16 MSD	AX26582 EB-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: 400-146328-1
SDG: Gorgas Landfill Catch-up (9)

General Chemistry (Continued)

Analysis Batch: 378735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-146328-1	AX26567 MW-5	Total/NA	Water	SM 4500 F C	
400-146328-2	AX26568 MW-6	Total/NA	Water	SM 4500 F C	
400-146328-3	AX26569 MW-20	Total/NA	Water	SM 4500 F C	
400-146328-4	AX26570 MW-19	Total/NA	Water	SM 4500 F C	
400-146328-5	AX26571 MW-19 DUP	Total/NA	Water	SM 4500 F C	
400-146328-6	AX26572 MW-18	Total/NA	Water	SM 4500 F C	
400-146328-7	AX26573 FB-1	Total/NA	Water	SM 4500 F C	
400-146328-8	AX26574 MW-16	Total/NA	Water	SM 4500 F C	
400-146328-9	AX26575 MW-15	Total/NA	Water	SM 4500 F C	
400-146328-10	AX26576 FB-2	Total/NA	Water	SM 4500 F C	
400-146328-11	AX26577 MW-14	Total/NA	Water	SM 4500 F C	
400-146328-12	AX26578 MW-14 DUP	Total/NA	Water	SM 4500 F C	
400-146328-13	AX26579 MW-13	Total/NA	Water	SM 4500 F C	
400-146328-14	AX26580 MW-7	Total/NA	Water	SM 4500 F C	
400-146328-15	AX26581 MW-8	Total/NA	Water	SM 4500 F C	
400-146328-16	AX26582 EB-1	Total/NA	Water	SM 4500 F C	
MB 400-378735/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-378735/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-146328-10 MS	AX26576 FB-2	Total/NA	Water	SM 4500 F C	
400-146328-10 MSD	AX26576 FB-2	Total/NA	Water	SM 4500 F C	
400-146328-16 MS	AX26582 EB-1	Total/NA	Water	SM 4500 F C	
400-146328-16 MSD	AX26582 EB-1	Total/NA	Water	SM 4500 F C	

QC Sample Results

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

TestAmerica Job ID: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-377726/6
Matrix: Water
Analysis Batch: 377726

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			11/29/17 13:56	1

Lab Sample ID: LCS 400-377726/7
Matrix: Water
Analysis Batch: 377726

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	30.2		mg/L		101	90 - 110

Lab Sample ID: MRL 400-377726/3
Matrix: Water
Analysis Batch: 377726

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: 400-146328-10 MS
Matrix: Water
Analysis Batch: 377726

Client Sample ID: AX26576 FB-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	FB Result	FB Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<0.60		10.0	10.9		mg/L		109	73 - 120

Lab Sample ID: 400-146328-10 MSD
Matrix: Water
Analysis Batch: 377726

Client Sample ID: AX26576 FB-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	FB Result	FB Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<0.60		10.0	11.1		mg/L		111	73 - 120	2	8

Lab Sample ID: 400-146328-16 MS
Matrix: Water
Analysis Batch: 377726

Client Sample ID: AX26582 EB-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	EB Result	EB Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<0.60		10.0	10.6		mg/L		106	73 - 120

Lab Sample ID: 400-146328-16 MSD
Matrix: Water
Analysis Batch: 377726

Client Sample ID: AX26582 EB-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	EB Result	EB Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<0.60		10.0	10.5		mg/L		105	73 - 120	1	8

QC Sample Results

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

TestAmerica Job ID: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-378735/3
Matrix: Water
Analysis Batch: 378735

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			12/07/17 07:26	1

Lab Sample ID: LCS 400-378735/4
Matrix: Water
Analysis Batch: 378735

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	3.84		mg/L		96	90 - 110

Lab Sample ID: 400-146328-10 MS
Matrix: Water
Analysis Batch: 378735

Client Sample ID: AX26576 FB-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	FB Result	FB Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	1.02		mg/L		102	75 - 125

Lab Sample ID: 400-146328-10 MSD
Matrix: Water
Analysis Batch: 378735

Client Sample ID: AX26576 FB-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	FB Result	FB Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	1.02		mg/L		102	75 - 125	0	4

Lab Sample ID: 400-146328-16 MS
Matrix: Water
Analysis Batch: 378735

Client Sample ID: AX26582 EB-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	EB Result	EB Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	1.00		mg/L		100	75 - 125

Lab Sample ID: 400-146328-16 MSD
Matrix: Water
Analysis Batch: 378735

Client Sample ID: AX26582 EB-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	EB Result	EB Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	1.02		mg/L		102	75 - 125	2	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-377674/6
Matrix: Water
Analysis Batch: 377674

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			11/29/17 08:45	1

QC Sample Results

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

TestAmerica Job ID: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: LCS 400-377674/7
Matrix: Water
Analysis Batch: 377674

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	14.4		mg/L		96	90 - 110

Lab Sample ID: MRL 400-377674/3
Matrix: Water
Analysis Batch: 377674

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	4.99	J	mg/L		100	50 - 150

Lab Sample ID: 400-146328-10 MS
Matrix: Water
Analysis Batch: 377674

Client Sample ID: AX26576 FB-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	FB Result	FB Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	10.2		mg/L		102	77 - 128

Lab Sample ID: 400-146328-10 MSD
Matrix: Water
Analysis Batch: 377674

Client Sample ID: AX26576 FB-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	FB Result	FB Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.4		mg/L		104	77 - 128	2	5

Lab Sample ID: 400-146328-16 MS
Matrix: Water
Analysis Batch: 377674

Client Sample ID: AX26582 EB-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	EB Result	EB Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	10.5		mg/L		105	77 - 128

Lab Sample ID: 400-146328-16 MSD
Matrix: Water
Analysis Batch: 377674

Client Sample ID: AX26582 EB-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	EB Result	EB Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.1		mg/L		101	77 - 128	3	5

Chain of Custody Record

Client Information		Sampler: Anthony Goggins/ Ben Rothschild Lab PM: Whitmire, Cheyenne R. Client Contact: Sarah Copeland E-Mail: cheyenne.whitmire@testamericainc.com Camer Tracking No(s):	
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 SSOW#: Gorgas Landfill Catch-up (9)		Due Date Requested: TAT Requested (days): Routine PO #: WO #: Project #: 40007143 CCR Site:	
Sample Identification AX26567 AX26568 AX26569 AX26570 AX26571 AX26572 AX26573 AX26574 AX26575		Sample Date 11/16/17 11/16/17 11/15/17 11/15/17 11/15/17 11/15/17 11/15/17 11/15/17 11/15/17	
Sample Type (C=comp, G=grab) G G G G G G G G		Matrix (W=water, S=solid, O=soil, B=air) Water Water Water Water Water Water Water Water	
Perform MS/MSD (Yes or No) X X X X X X X X		Field Filtered Sample (Yes or No) X X X X X X X X	
SM 4500 F.C. SM 4500 CLF SM 4500 SO4.F		Total Number of containers 1 1 1 1 1 1 1 1	
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:		Special Instructions/Note: MW-5 MW-6 MW-20 MW-19 MW-19 Dup (Sample Duplicate) MW-18 FB-1 (Field Blank) MW-16 MW-15	
Analysis Requested Special Instructions/OC Requirements: <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)			
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: Relinquished by: Sarah Copeland Relinquished by: Relinquished by:		Method of Shipment: Date/Time: 11/17/2017: 0945 Date/Time: Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.6°C 2R8	



Client Information		Sampler: Ben Rothschild		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		GOC No: 400-56525-24537.1	
Client Contact: Sarah Copeland		Phone:		E-Mail: cheyenne.whitmire@testamerica.com		Page: Page 2 of 2		Job #:	
Company: Alabama Power General Test Laboratory		Due Date Requested:		Analysis Requested		Preservation Codes:		Special Instructions/Note:	
Address: 744 County Rd 87 GSC #8		TAT Requested (days):		Routine		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:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
City: Calera		PO #:		Perform MS/MSD (Yes or No)		SM 4500 F.C		Total Number of Containers	
State/Zip: AL, 35040		WO #:		Field Filtered Sample (Yes or No)		SM 4500 Cl.E			
Phone: 205-664-6121(Tel)		Project #:		Matrix (Water, Solid, Sewer, BT-Tissue, A-Air)		SM 4500 SO4.E			
Email: sgcopela@southernco.com		SSOW#:		Preservation Code:					
CCR		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Special Instructions/Note:	
Site: Gorgas Landfill Catch-up (9)		11/16/17		1250		G		FB-2 (Field Blank)	
		11/16/17		1256		G		MW-14	
		11/16/17		1256		G		MW-14 Dup (Sample Duplicate)	
		11/16/17		1352		G		MW-13	
		11/16/17		1450		G		MW-7	
		11/16/17		1541		G		MW-8	
		11/16/17		1605		G		EB-1 (Equipment Blank)	

Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: Sarah Copeland Date/Time: 11/17/2017, 0945

Relinquished by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Custody Seals Intact: Yes No

Custody Seal No.: _____

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

Special Instructions/QC Requirements:

Method of Shipment: _____ Date/Time: 11/21/17 0806

Received by: _____ Company: APC

Received by: _____ Company: _____

Received by: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks:



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-146328-1
SDG Number: Gorgas Landfill Catch-up (9)

Login Number: 146328
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6°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: 400-146328-1
 SDG: Gorgas Landfill Catch-up (9)

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	01-11-18
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	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
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



Plant Gorgas Bottom Ash Landfill
Field pH Data

Well	Date	Results	Units
MW-1	4/26/2016	5.2	SU
MW-1	6/20/2016	5.18	SU
MW-1	8/8/2016	5.12	SU
MW-1	10/3/2016	5.21	SU
MW-1	10/3/2016	5.21	SU
MW-1	10/3/2016	5.21	SU
MW-1	11/21/2016	5.19	SU
MW-1	11/21/2016	5.19	SU
MW-1	1/17/2017	5.17	SU
MW-1	1/17/2017	5.17	SU
MW-1	3/22/2017	5.2	SU
MW-1	3/22/2017	5.2	SU
MW-1	5/30/2017	5.14	SU
MW-1	5/30/2017	5.14	SU
MW-1	8/23/2017	5.12	SU
MW-1	8/23/2017	5.12	SU
MW-10	4/27/2016	5.8	SU
MW-10	6/23/2016	6.38	SU
MW-10	8/10/2016	6.47	SU
MW-10	10/5/2016	6.42	SU
MW-10	10/5/2016	6.42	SU
MW-10	11/21/2016	6.38	SU
MW-10	1/17/2017	6.35	SU
MW-10	3/21/2017	6.38	SU
MW-10	5/31/2017	6.4	SU
MW-10	8/23/2017	6.33	SU
MW-11	4/26/2016	6.49	SU
MW-11	6/22/2016	6.51	SU
MW-11	8/9/2016	6.49	SU
MW-11	10/4/2016	6.51	SU
MW-11	10/4/2016	6.51	SU
MW-11	11/21/2016	6.48	SU
MW-11	1/17/2017	6.46	SU
MW-11	3/21/2017	6.47	SU
MW-11	5/30/2017	6.48	SU
MW-11	8/23/2017	6.48	SU
MW-12	4/28/2016	5.78	SU
MW-12	6/22/2016	6.41	SU
MW-12	8/10/2016	5.82	SU
MW-12	10/5/2016	5.82	SU
MW-12	10/5/2016	5.82	SU
MW-12	11/22/2016	5.86	SU
MW-12	1/18/2017	5.9	SU
MW-12	3/21/2017	5.85	SU
MW-12	5/31/2017	5.84	SU
MW-12	8/23/2017	5.91	SU

Plant Gorgas Bottom Ash Landfill
Field pH Data

Well	Date	Results	Units
MW-2	4/25/2016	5.94	SU
MW-2	6/20/2016	5.96	SU
MW-2	8/8/2016	5.88	SU
MW-2	10/3/2016	5.91	SU
MW-2	10/3/2016	5.91	SU
MW-2	10/3/2016	5.91	SU
MW-2	11/21/2016	5.82	SU
MW-2	11/21/2016	5.82	SU
MW-2	1/17/2017	5.87	SU
MW-2	1/17/2017	5.87	SU
MW-2	3/22/2017	6.01	SU
MW-2	3/22/2017	6.01	SU
MW-2	5/31/2017	5.85	SU
MW-2	5/31/2017	5.85	SU
MW-2	8/23/2017	5.89	SU
MW-2	8/23/2017	5.89	SU
MW-3	4/25/2016	5.56	SU
MW-3	6/22/2016	5.57	SU
MW-3	8/9/2016	5.67	SU
MW-3	10/4/2016	5.69	SU
MW-3	10/4/2016	5.69	SU
MW-3	10/4/2016	5.69	SU
MW-3	11/21/2016	5.42	SU
MW-3	11/21/2016	5.42	SU
MW-3	1/18/2017	5.11	SU
MW-3	1/18/2017	5.11	SU
MW-3	3/22/2017	4.52	SU
MW-3	3/22/2017	4.52	SU
MW-3	5/31/2017	4.56	SU
MW-3	5/31/2017	4.56	SU
MW-3	8/23/2017	4.77	SU
MW-3	8/23/2017	4.77	SU
MW-4	4/25/2016	6.22	SU
MW-4	6/20/2016	6.21	SU
MW-4	8/9/2016	6.11	SU
MW-4	10/3/2016	6.13	SU
MW-4	10/3/2016	6.13	SU
MW-4	10/3/2016	6.13	SU
MW-4	11/21/2016	6.09	SU
MW-4	11/21/2016	6.09	SU
MW-4	1/18/2017	6.09	SU
MW-4	1/18/2017	6.09	SU
MW-4	3/22/2017	6.15	SU
MW-4	3/22/2017	6.15	SU
MW-4	5/31/2017	6.13	SU
MW-4	5/31/2017	6.13	SU

Plant Gorgas Bottom Ash Landfill
Field pH Data

Well	Date	Results	Units
MW-4	8/23/2017	6.12	SU
MW-4	8/23/2017	6.12	SU
MW-7	4/27/2016	6.6	SU
MW-7	6/21/2016	6.62	SU
MW-7	10/12/2017	6.64	SU
MW-7	10/13/2017	6.64	SU
MW-7	10/14/2017	6.66	SU
MW-7	10/15/2017	6.67	SU
MW-7	10/16/2017	6.67	SU
MW-7	10/17/2017	6.66	SU
MW-7	11/16/2017	6.62	SU
MW-8	4/27/2016	6.55	SU
MW-8	6/21/2016	6.47	SU
MW-8	10/12/2017	6.5	SU
MW-8	10/13/2017	6.51	SU
MW-8	10/14/2017	6.53	SU
MW-8	10/15/2017	6.53	SU
MW-8	10/16/2017	6.54	SU
MW-8	10/17/2017	6.54	SU
MW-8	11/16/2017	6.51	SU

Appendix B

Statistical Data Evaluation

Interwell Prediction Limits - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF Printed 1/4/2018, 3:50 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>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDsND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	MW-10	0.06605	n/a	8/23/2017	0.181	Yes	36	-3.367	0.3411	2.778	None	In(x)	0.001504 Param Inter 1 of 2
Boron (mg/L)	MW-12	0.06605	n/a	8/23/2017	0.185	Yes	36	-3.367	0.3411	2.778	None	In(x)	0.001504 Param Inter 1 of 2
Chloride (mg/L)	MW-7	3.971	n/a	11/16/2017	35	Yes	36	1.499	0.2588	0	None	sqrt(x)	0.001504 Param Inter 1 of 2
Chloride (mg/L)	MW-8	3.971	n/a	11/16/2017	130	Yes	36	1.499	0.2588	0	None	sqrt(x)	0.001504 Param Inter 1 of 2
Chloride (mg/L)	MW-10	3.971	n/a	8/23/2017	6.1	Yes	36	1.499	0.2588	0	None	sqrt(x)	0.001504 Param Inter 1 of 2
Chloride (mg/L)	MW-12	3.971	n/a	8/23/2017	4.2	Yes	36	1.499	0.2588	0	None	sqrt(x)	0.001504 Param Inter 1 of 2
pH (SU)	MW-7	6.22	4.52	11/16/2017	6.62	Yes	36	n/a	n/a	0	n/a	n/a	0.002788 NP Inter (normality) 1 of 2
pH (SU)	MW-8	6.22	4.52	11/16/2017	6.51	Yes	36	n/a	n/a	0	n/a	n/a	0.002788 NP Inter (normality) 1 of 2
pH (SU)	MW-10	6.22	4.52	8/23/2017	6.33	Yes	36	n/a	n/a	0	n/a	n/a	0.002788 NP Inter (normality) 1 of 2
pH (SU)	MW-11	6.22	4.52	8/23/2017	6.48	Yes	36	n/a	n/a	0	n/a	n/a	0.002788 NP Inter (normality) 1 of 2

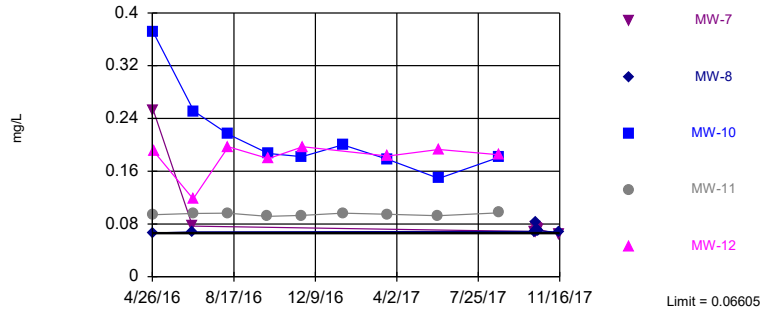
Interwell Prediction Limits - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF Printed 1/4/2018, 3:50 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>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDsND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	MW-7	0.06605	n/a	11/16/2017	0.0644	No	36	-3.367	0.3411	2.778	None	ln(x)	0.001504 Param Inter 1 of 2
Boron (mg/L)	MW-8	0.06605	n/a	11/16/2017	0.0675	No	36	-3.367	0.3411	2.778	None	ln(x)	0.001504 Param Inter 1 of 2
Boron (mg/L)	MW-10	0.06605	n/a	8/23/2017	0.181	Yes	36	-3.367	0.3411	2.778	None	ln(x)	0.001504 Param Inter 1 of 2
Boron (mg/L)	MW-11	0.06605	n/a	8/23/2017	0.0968	No	36	-3.367	0.3411	2.778	None	ln(x)	0.001504 Param Inter 1 of 2
Boron (mg/L)	MW-12	0.06605	n/a	8/23/2017	0.185	Yes	36	-3.367	0.3411	2.778	None	ln(x)	0.001504 Param Inter 1 of 2
Chloride (mg/L)	MW-7	3.971	n/a	11/16/2017	35	Yes	36	1.499	0.2588	0	None	sqrt(x)	0.001504 Param Inter 1 of 2
Chloride (mg/L)	MW-8	3.971	n/a	11/16/2017	130	Yes	36	1.499	0.2588	0	None	sqrt(x)	0.001504 Param Inter 1 of 2
Chloride (mg/L)	MW-10	3.971	n/a	8/23/2017	6.1	Yes	36	1.499	0.2588	0	None	sqrt(x)	0.001504 Param Inter 1 of 2
Chloride (mg/L)	MW-11	3.971	n/a	8/23/2017	2.8	No	36	1.499	0.2588	0	None	sqrt(x)	0.001504 Param Inter 1 of 2
Chloride (mg/L)	MW-12	3.971	n/a	8/23/2017	4.2	Yes	36	1.499	0.2588	0	None	sqrt(x)	0.001504 Param Inter 1 of 2
pH (SU)	MW-7	6.22	4.52	11/16/2017	6.62	Yes	36	n/a	n/a	0	n/a	n/a	0.002788 NP Inter (normality) 1 of 2
pH (SU)	MW-8	6.22	4.52	11/16/2017	6.51	Yes	36	n/a	n/a	0	n/a	n/a	0.002788 NP Inter (normality) 1 of 2
pH (SU)	MW-10	6.22	4.52	8/23/2017	6.33	Yes	36	n/a	n/a	0	n/a	n/a	0.002788 NP Inter (normality) 1 of 2
pH (SU)	MW-11	6.22	4.52	8/23/2017	6.48	Yes	36	n/a	n/a	0	n/a	n/a	0.002788 NP Inter (normality) 1 of 2
pH (SU)	MW-12	6.22	4.52	8/23/2017	5.91	No	36	n/a	n/a	0	n/a	n/a	0.002788 NP Inter (normality) 1 of 2

Exceeds Limit: MW-10, MW-12

Prediction Limit
Interwell Parametric

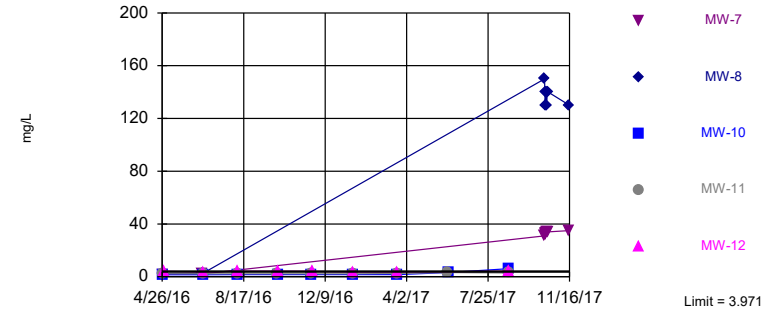


Background Data Summary (based on natural log transformation): Mean=-3.367, Std. Dev.=0.3411, n=36, 2.778% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9288, critical = 0.912. Kappa = 1.906 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Boron Analysis Run 1/4/2018 3:48 PM View: Interwell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Exceeds Limit: MW-7, MW-8, MW-10, MW-12

Prediction Limit
Interwell Parametric

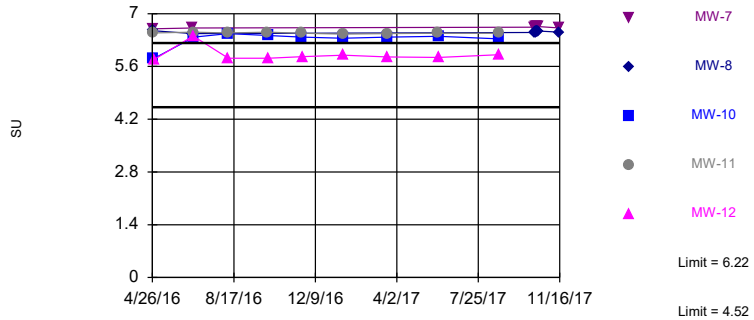


Background Data Summary (based on square root transformation): Mean=1.499, Std. Dev.=0.2588, n=36. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9342, critical = 0.912. Kappa = 1.906 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Chloride Analysis Run 1/4/2018 3:48 PM View: Interwell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Exceeds Limits: MW-7, MW-8, MW-10, MW-11

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 36 background values. Annual per-constituent alpha = 0.0277. Individual comparison alpha = 0.002788 (1 of 2). Comparing 5 points to limit.

Constituent: pH Analysis Run 1/4/2018 3:48 PM View: Interwell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Intrawell Prediction Limits - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF Printed 1/29/2018, 2:02 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Bq.N</u>	<u>Bq.Mean</u>	<u>Std.Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Fluoride (mg/L)	MW-3	0.5201	n/a	8	0.3188	0.06957	0	None	No	0.001504	Param Intra 1 of 2

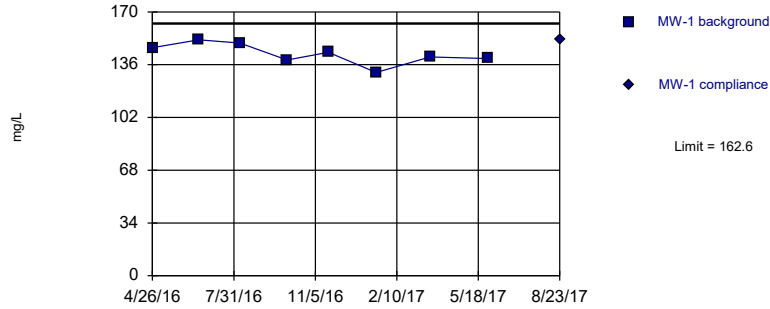
Intrawell Prediction Limits

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF Printed 1/4/2018, 3:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDsND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-1	162.6	n/a	8/23/2017	152	No	8	143	6.761	0	None	No	0.001504 Param Intra 1 of 2
Calcium (mg/L)	MW-2	229.5	n/a	8/23/2017	155	No	8	166	21.95	0	None	No	0.001504 Param Intra 1 of 2
Calcium (mg/L)	MW-3	477.3	n/a	8/23/2017	298	No	8	288.9	65.12	0	None	No	0.001504 Param Intra 1 of 2
Calcium (mg/L)	MW-4	446.3	n/a	8/23/2017	297	No	8	310	47.1	0	None	No	0.001504 Param Intra 1 of 2
Calcium (mg/L)	MW-7	400.9	n/a	11/16/2017	299	No	8	287.4	39.22	0	None	No	0.001504 Param Intra 1 of 2
Calcium (mg/L)	MW-8	317.7	n/a	11/16/2017	308	No	8	296.3	7.402	0	None	No	0.001504 Param Intra 1 of 2
Calcium (mg/L)	MW-10	361.1	n/a	8/23/2017	147	No	8	204.3	54.18	0	None	No	0.001504 Param Intra 1 of 2
Calcium (mg/L)	MW-11	441.4	n/a	8/23/2017	374	No	8	385.3	19.4	0	None	No	0.001504 Param Intra 1 of 2
Calcium (mg/L)	MW-12	397.6	n/a	8/23/2017	349	No	8	347.6	17.28	0	None	No	0.001504 Param Intra 1 of 2
Fluoride (mg/L)	MW-1	0.214	n/a	8/23/2017	0.16	No	8	0.1151	0.03418	0	None	No	0.001504 Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.2369	n/a	8/23/2017	0.16	No	8	0.1088	0.04429	0	None	No	0.001504 Param Intra 1 of 2
Fluoride (mg/L)	MW-3	0.5201	n/a	8/23/2017	0.55	Yes	8	0.3188	0.06957	0	None	No	0.001504 Param Intra 1 of 2
Fluoride (mg/L)	MW-4	0.4814	n/a	8/23/2017	0.38	No	8	0.2989	0.06306	0	None	No	0.001504 Param Intra 1 of 2
Fluoride (mg/L)	MW-7	0.2318	n/a	11/16/2017	0.18	No	8	0.1891	0.01475	0	None	No	0.001504 Param Intra 1 of 2
Fluoride (mg/L)	MW-8	0.2371	n/a	11/16/2017	0.22	No	8	0.2179	0.006643	0	None	No	0.001504 Param Intra 1 of 2
Fluoride (mg/L)	MW-10	0.3976	n/a	8/23/2017	0.23	No	8	0.1488	0.08598	0	None	No	0.001504 Param Intra 1 of 2
Fluoride (mg/L)	MW-11	0.3752	n/a	8/23/2017	0.11	No	8	0.3113	0.1041	12.5	None	sqrt(x)	0.001504 Param Intra 1 of 2
Fluoride (mg/L)	MW-12	0.2318	n/a	8/23/2017	0.13	No	8	0.09988	0.04557	0	None	No	0.001504 Param Intra 1 of 2
Sulfate (mg/L)	MW-1	1582	n/a	8/23/2017	1500	No	8	1438	49.79	0	None	No	0.001504 Param Intra 1 of 2
Sulfate (mg/L)	MW-2	1444	n/a	8/23/2017	920	No	8	1026	144.5	0	None	No	0.001504 Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3719	n/a	8/23/2017	2600	No	8	2334	478.7	0	None	No	0.001504 Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3324	n/a	8/23/2017	2700	No	8	2668	226.8	0	None	No	0.001504 Param Intra 1 of 2
Sulfate (mg/L)	MW-7	1643	n/a	11/16/2017	1300	No	8	1308	116	0	None	No	0.001504 Param Intra 1 of 2
Sulfate (mg/L)	MW-8	1600	n/a	11/16/2017	1400	No	8	n/a	n/a	0	n/a	n/a	0.02144 NP Intra (normality) 1 of 2
Sulfate (mg/L)	MW-10	1490	n/a	8/23/2017	700	No	8	894.5	205.9	0	None	No	0.001504 Param Intra 1 of 2
Sulfate (mg/L)	MW-11	1953	n/a	8/23/2017	1700	No	7	1750	70.24	0	None	No	0.001504 Param Intra 1 of 2
Sulfate (mg/L)	MW-12	2718	n/a	8/23/2017	2100	No	8	2215	173.7	0	None	No	0.001504 Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-1	2322	n/a	8/23/2017	2160	No	8	2078	84.47	0	None	No	0.001504 Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	2280	n/a	8/23/2017	1550	No	8	1670	210.6	0	None	No	0.001504 Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	5046	n/a	8/23/2017	4050	No	8	3398	569.6	0	None	No	0.001504 Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-4	4785	n/a	8/23/2017	3990	No	8	1.6e7	2338677	0	None	x^2	0.001504 Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-7	2954	n/a	11/16/2017	2460	No	8	1.1e10	5.1e9	0	None	x^3	0.001504 Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-8	2964	n/a	11/16/2017	2650	No	8	2583	132	0	None	No	0.001504 Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-10	2285	n/a	8/23/2017	1160	No	8	1499	271.6	0	None	No	0.001504 Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-11	3123	n/a	8/23/2017	2760	No	8	2790	115.1	0	None	No	0.001504 Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-12	4374	n/a	8/23/2017	3250	No	7	3420	329.7	0	None	No	0.001504 Param Intra 1 of 2

Within Limit

Prediction Limit
Intrawell Parametric

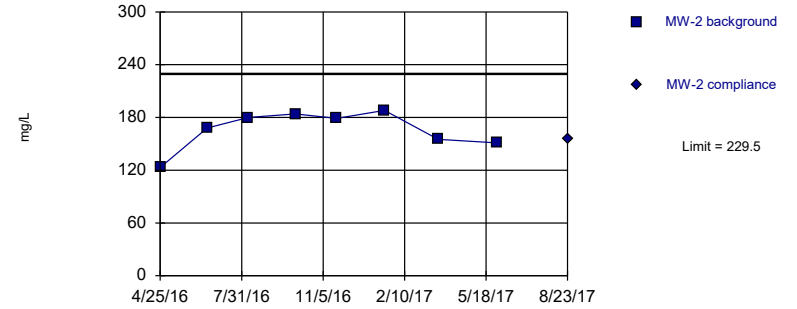


Background Data Summary: Mean=143, Std. Dev.=6.761, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9656, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

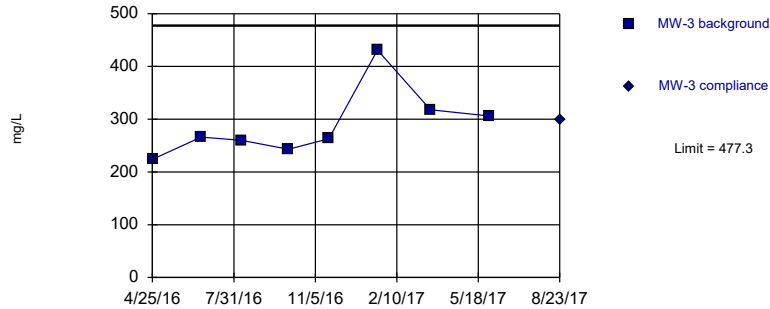


Background Data Summary: Mean=166, Std. Dev.=21.95, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8891, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

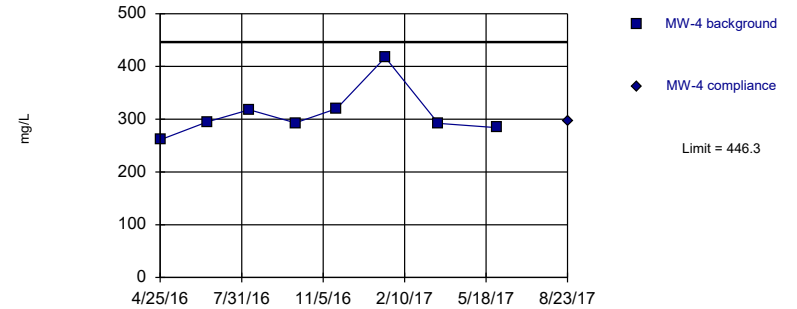


Background Data Summary: Mean=288.9, Std. Dev.=65.12, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8325, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

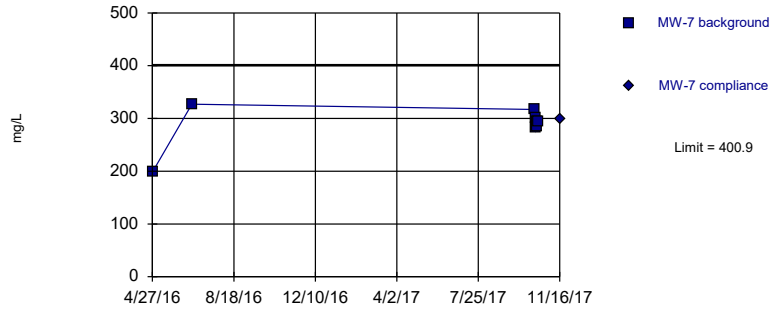
Prediction Limit
Intrawell Parametric



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 overridden to 2.894.

Constituent: Calcium Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

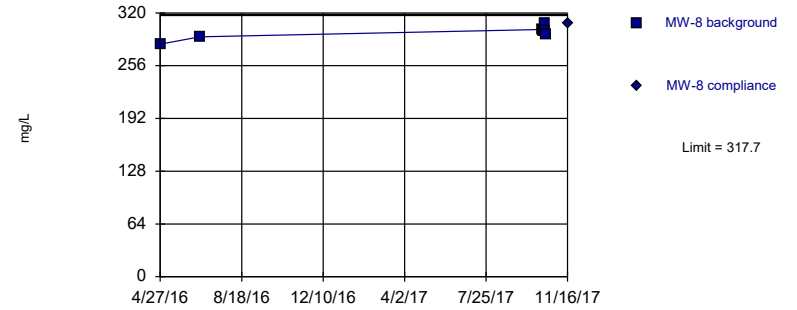
Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=287.4, Std. Dev.=39.22, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7855, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

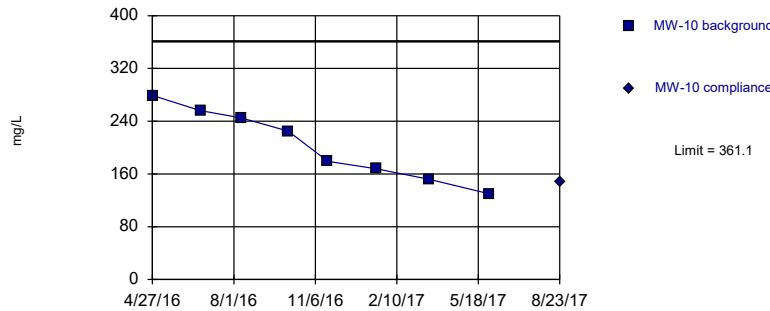
Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=296.3, Std. Dev.=7.402, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.932, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

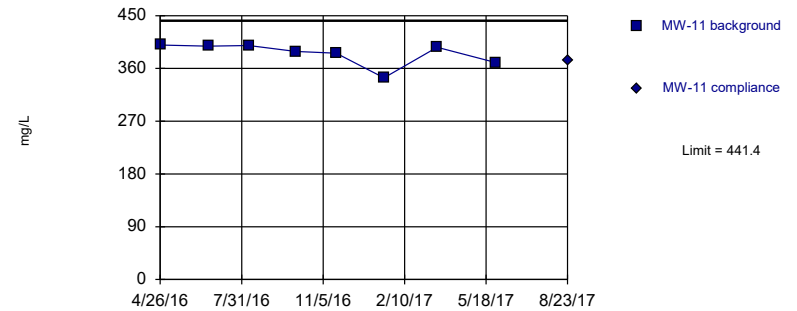
Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=204.3, Std. Dev.=54.18, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9412, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit Prediction Limit
Intrawell Parametric

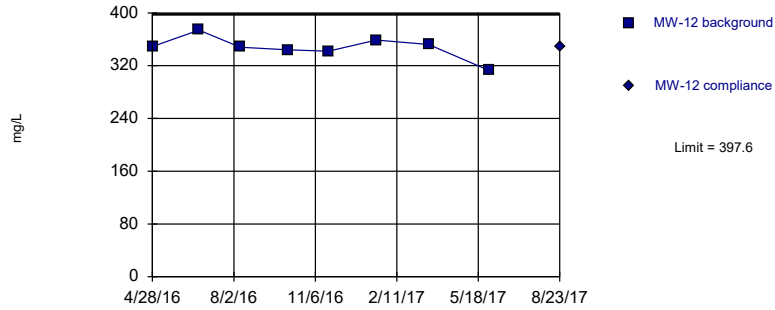


Background Data Summary: Mean=385.3, Std. Dev.=19.4, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7879, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

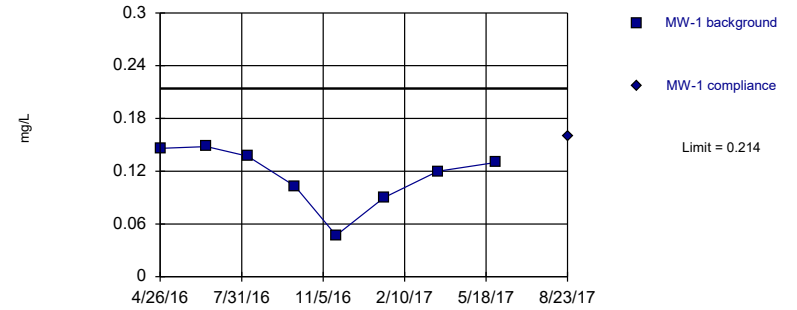


Background Data Summary: Mean=347.6, Std. Dev.=17.28, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9157, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

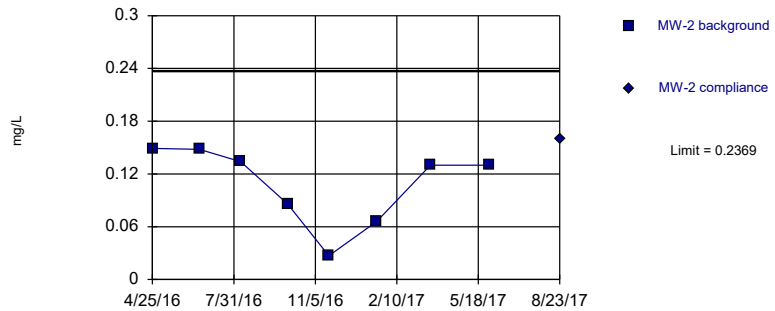


Background Data Summary: Mean=0.1151, Std. Dev.=0.03418, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8905, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

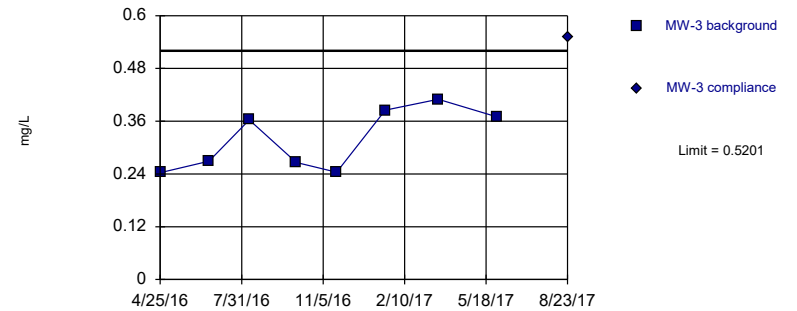


Background Data Summary: Mean=0.1088, Std. Dev.=0.04429, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8518, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Exceeds Limit

Prediction Limit Intrawell Parametric

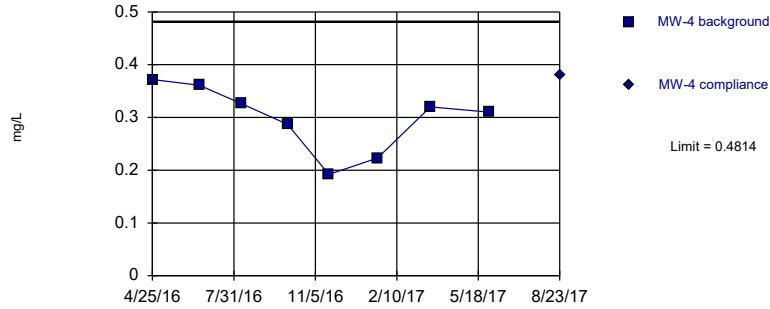


Background Data Summary: Mean=0.3188, Std. Dev.=0.06957, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8437, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

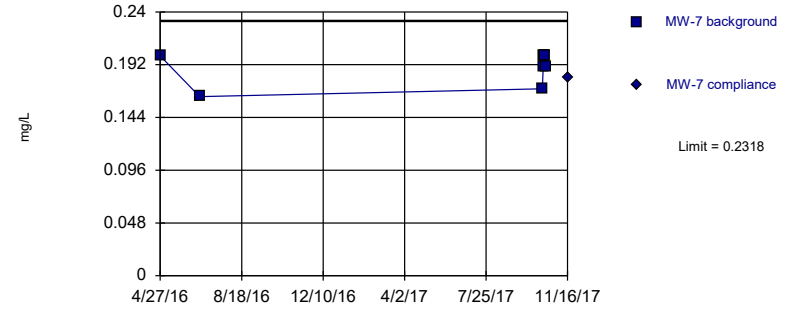


Background Data Summary: Mean=0.2989, Std. Dev.=0.06306, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9193, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

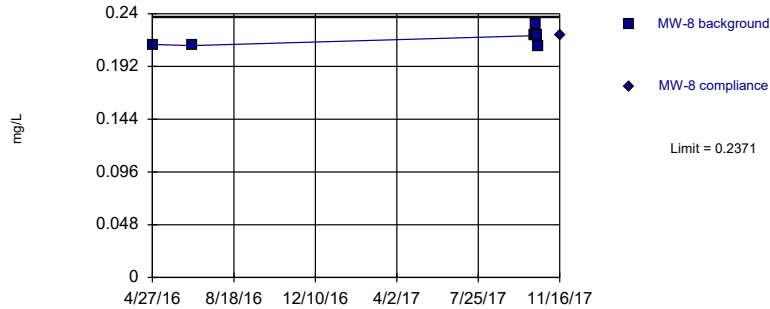


Background Data Summary: Mean=0.1891, Std. Dev.=0.01475, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7675, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

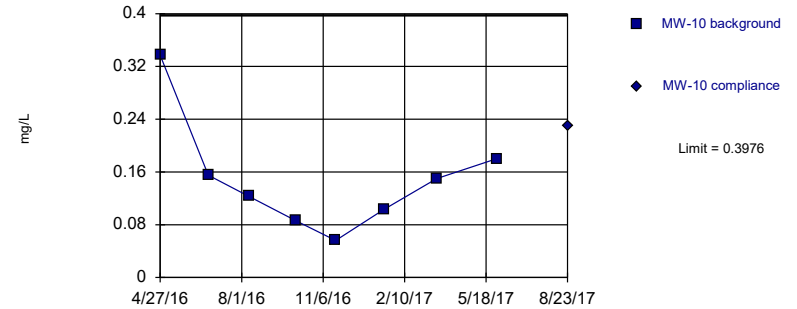


Background Data Summary: Mean=0.2179, Std. Dev.=0.006643, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.865, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

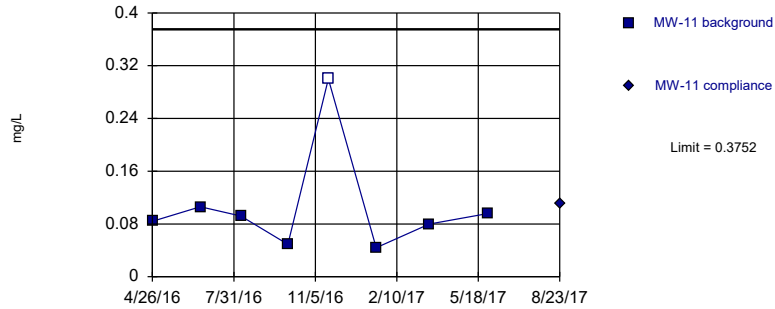


Background Data Summary: Mean=0.1488, Std. Dev.=0.08598, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8552, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

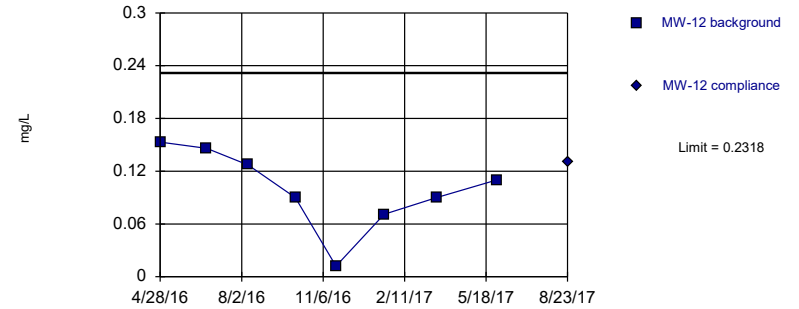


Background Data Summary (based on square root transformation): Mean=0.3113, Std. Dev.=0.1041, n=8, 12.5%
NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7785, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

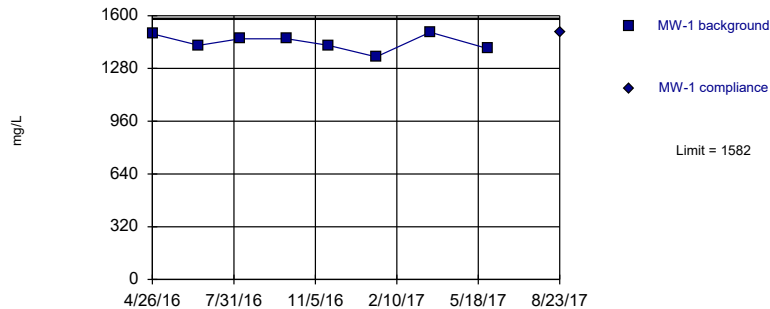


Background Data Summary: Mean=0.09988, Std. Dev.=0.04557, n=8. Normality test: Shapiro Wilk @alpha = 0.01,
calculated = 0.9357, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

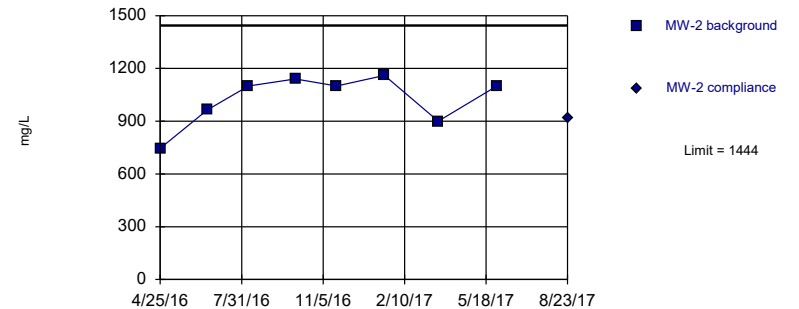


Background Data Summary: Mean=1438, Std. Dev.=49.79, n=8. Normality test: Shapiro Wilk @alpha = 0.01,
calculated = 0.9513, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

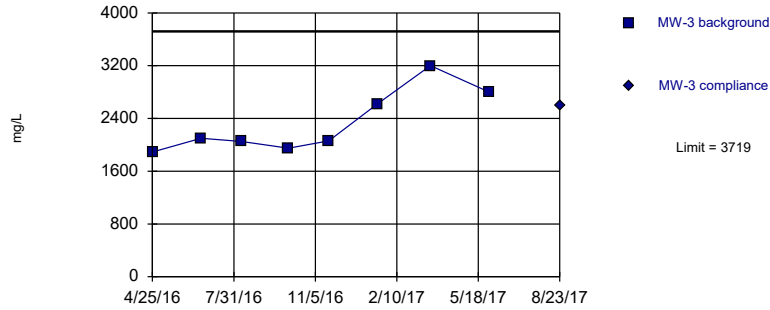


Background Data Summary: Mean=1026, Std. Dev.=144.5, n=8. Normality test: Shapiro Wilk @alpha = 0.01,
calculated = 0.8425, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

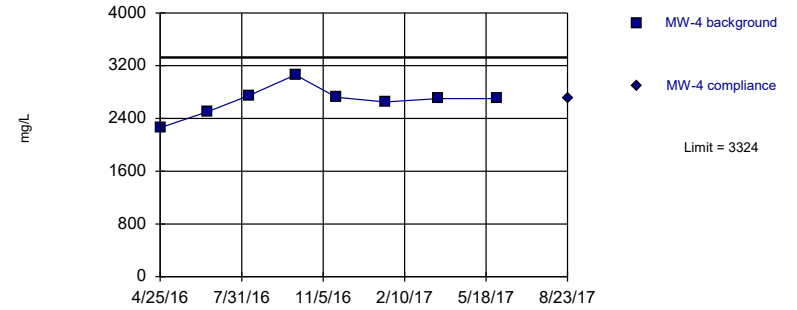


Background Data Summary: Mean=2334, Std. Dev.=478.7, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8438, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

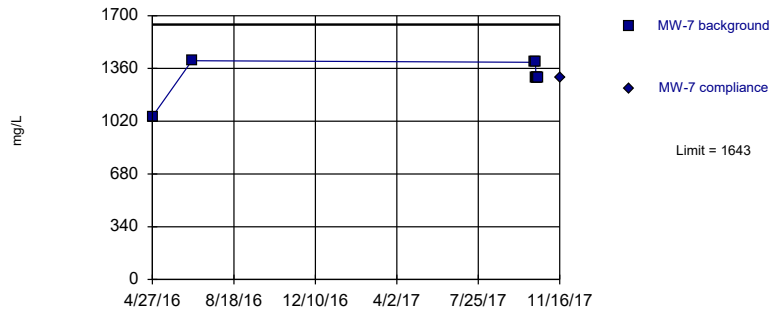


Background Data Summary: Mean=2668, Std. Dev.=226.8, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9195, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Parametric

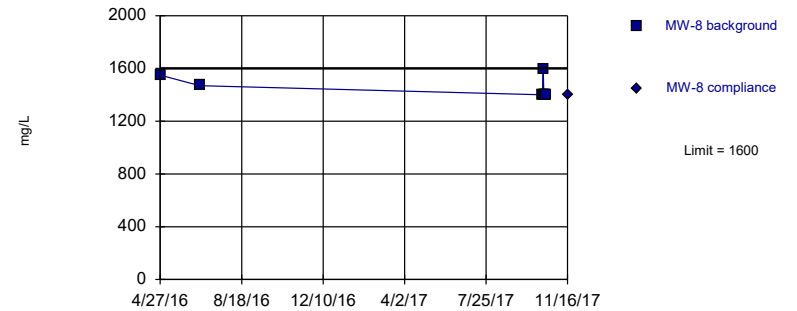


Background Data Summary: Mean=1308, Std. Dev.=116, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7569, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit Intrawell Non-parametric

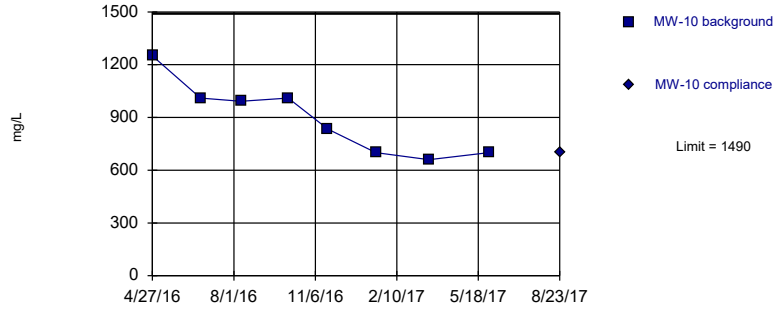


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Sulfate Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

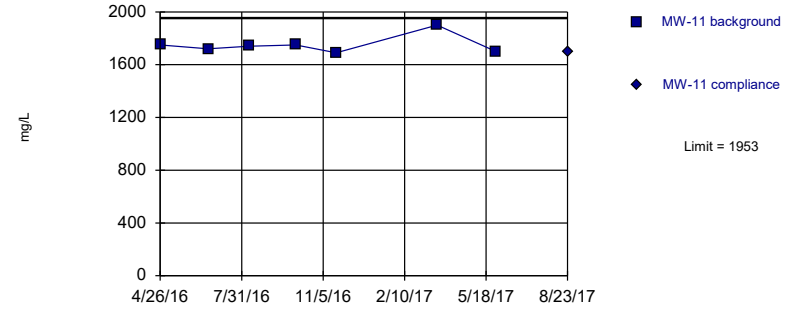


Background Data Summary: Mean=894.5, Std. Dev.=205.9, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.904, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

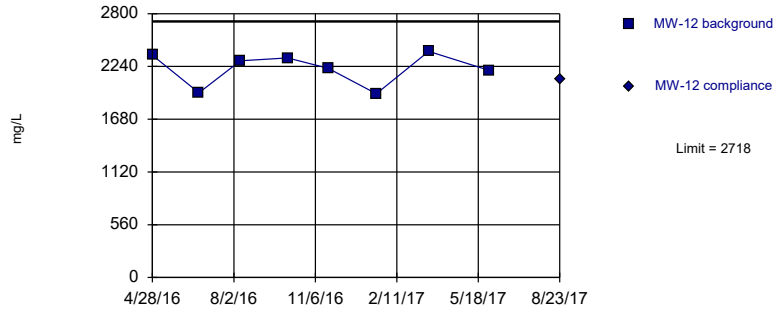


Background Data Summary: Mean=1750, Std. Dev.=70.24, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7627, critical = 0.73. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

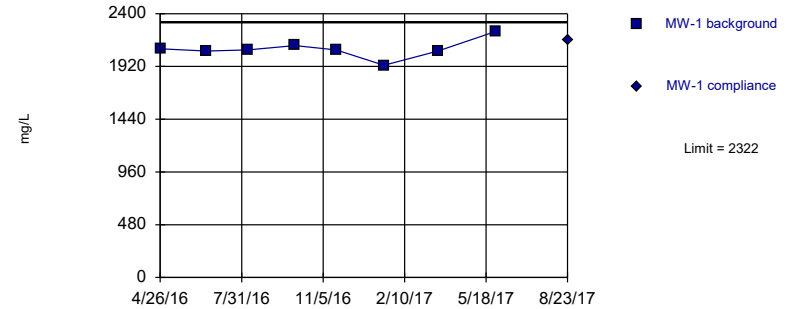


Background Data Summary: Mean=2215, Std. Dev.=173.7, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8595, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

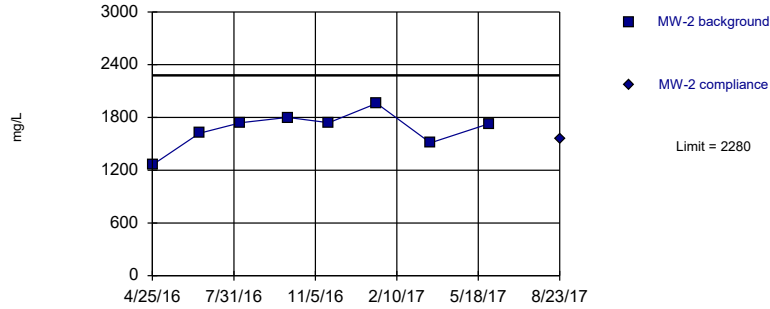


Background Data Summary: Mean=2078, Std. Dev.=84.47, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8572, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

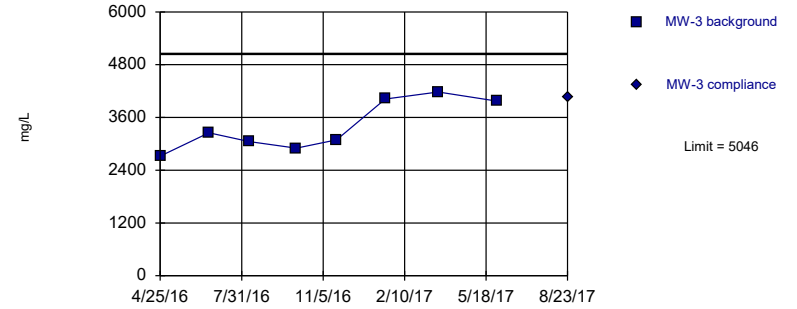


Background Data Summary: Mean=1670, Std. Dev.=210.6, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.928, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

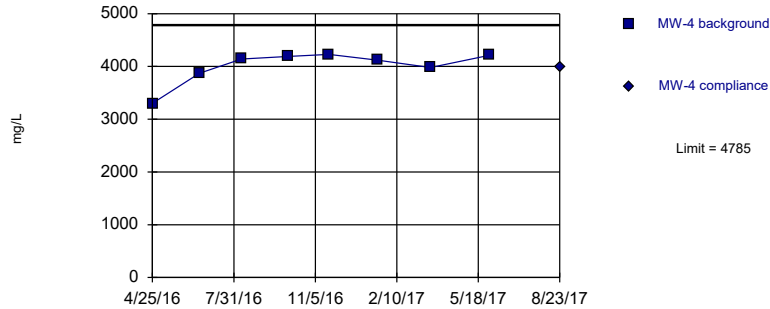


Background Data Summary: Mean=3398, Std. Dev.=569.6, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.872, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

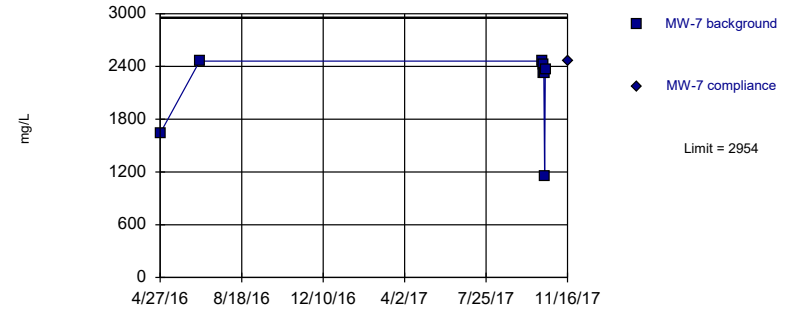


Background Data Summary (based on square transformation): Mean=1.6e7, Std. Dev.=2338677, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7661, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

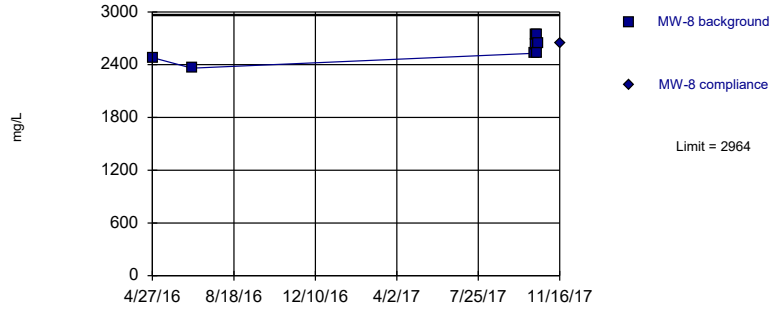


Background Data Summary (based on cube transformation): Mean=1.1e10, Std. Dev.=5.1e9, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7542, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

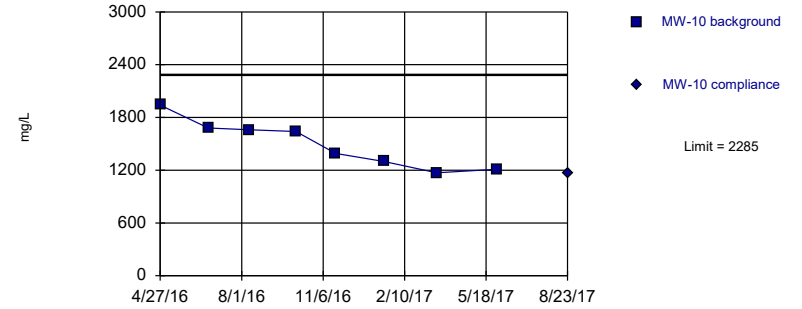


Background Data Summary: Mean=2583, Std. Dev.=132, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9411, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

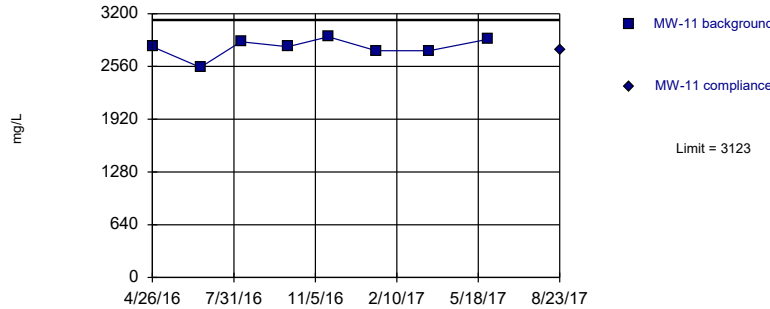


Background Data Summary: Mean=1499, Std. Dev.=271.6, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9261, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric

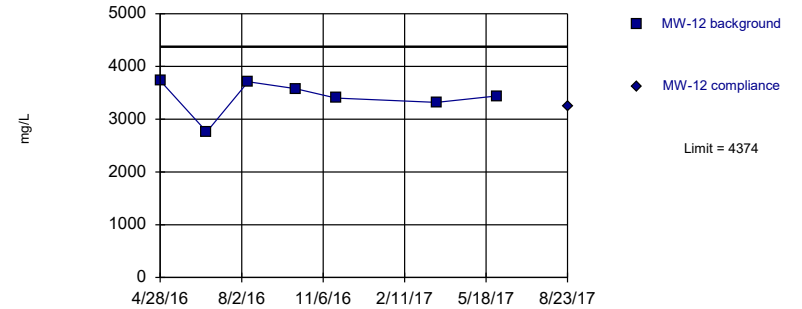


Background Data Summary: Mean=2790, Std. Dev.=115.1, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.89, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Within Limit

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=3420, Std. Dev.=329.7, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8579, critical = 0.73. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 3:46 PM View: PL's - Intrawell
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

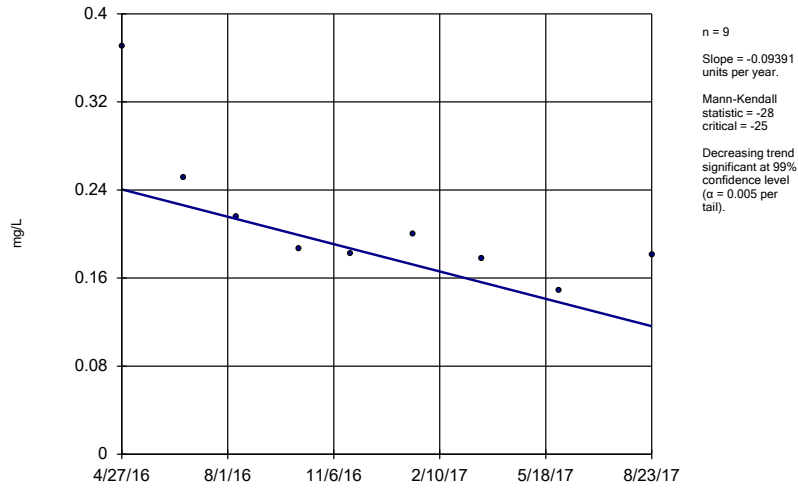
Trend Test Summary Table

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF Printed 1/8/2018, 11:05 AM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	MW-10	-0.09391	-28	-25	Yes	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	MW-12	0.00373	3	21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-7	23.5	33	25	Yes	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-8	84.48	8	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-10	0.3135	30	25	Yes	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-12	0	0	21	No	8	0	n/a	n/a	0.01	NP
pH (SU)	MW-7	0.03032	16	25	No	9	0	n/a	n/a	0.01	NP
pH (SU)	MW-8	0.03801	9	25	No	9	0	n/a	n/a	0.01	NP
pH (SU)	MW-10	-0.01534	-3	-25	No	9	0	n/a	n/a	0.01	NP
pH (SU)	MW-12	0.0603	11	25	No	9	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

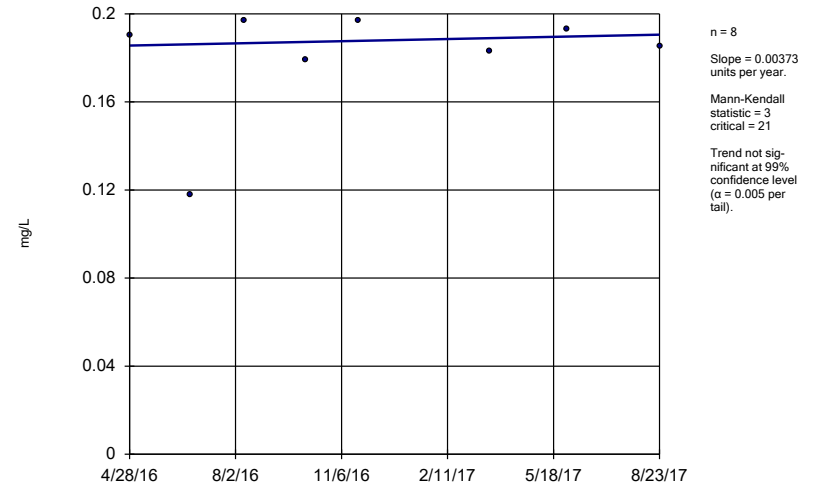
MW-10



Constituent: Boron Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLS
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Sen's Slope Estimator

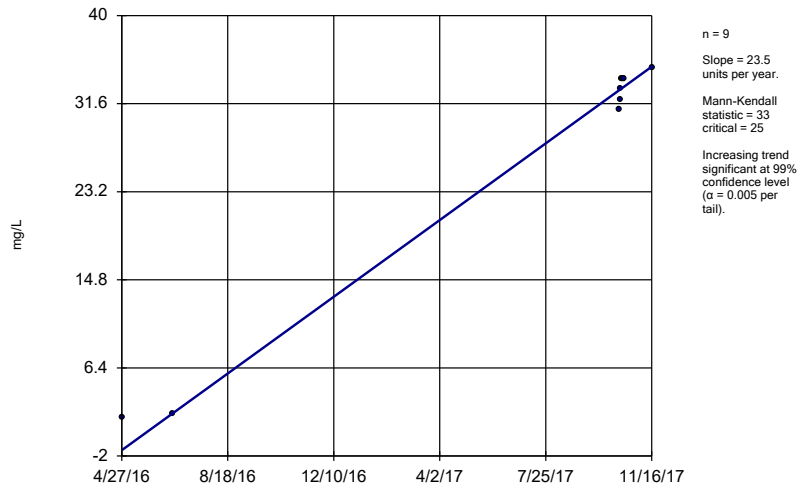
MW-12



Constituent: Boron Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLS
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Sen's Slope Estimator

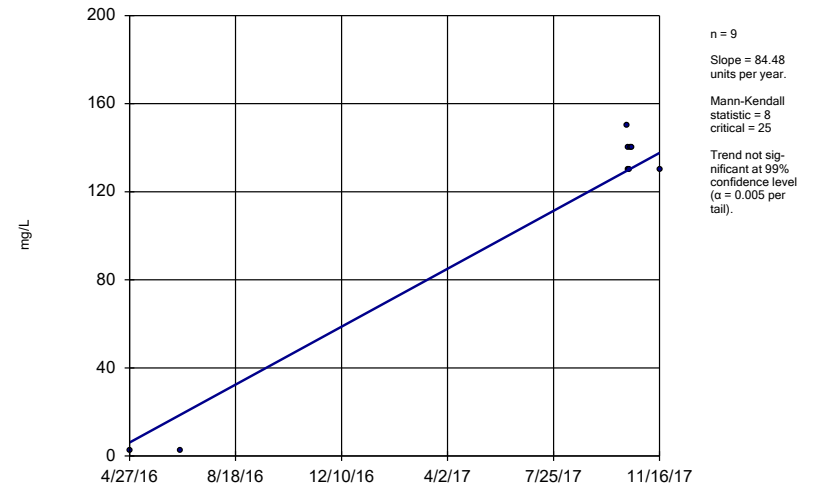
MW-7



Constituent: Chloride Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLS
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Sen's Slope Estimator

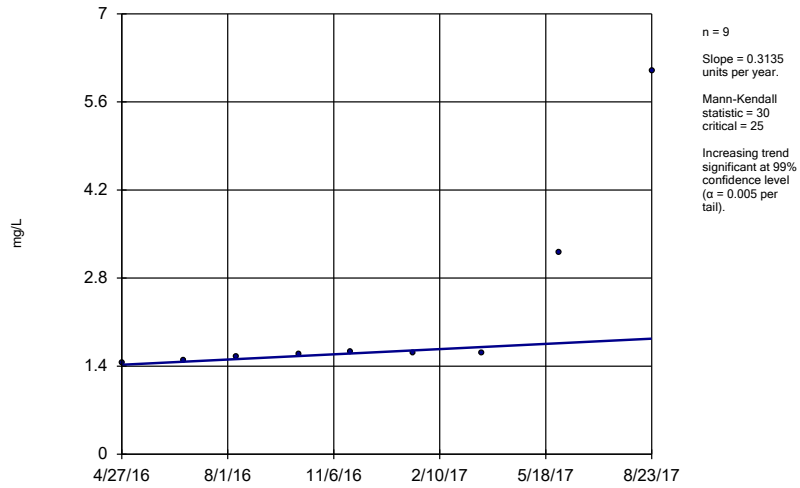
MW-8



Constituent: Chloride Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLS
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Sen's Slope Estimator

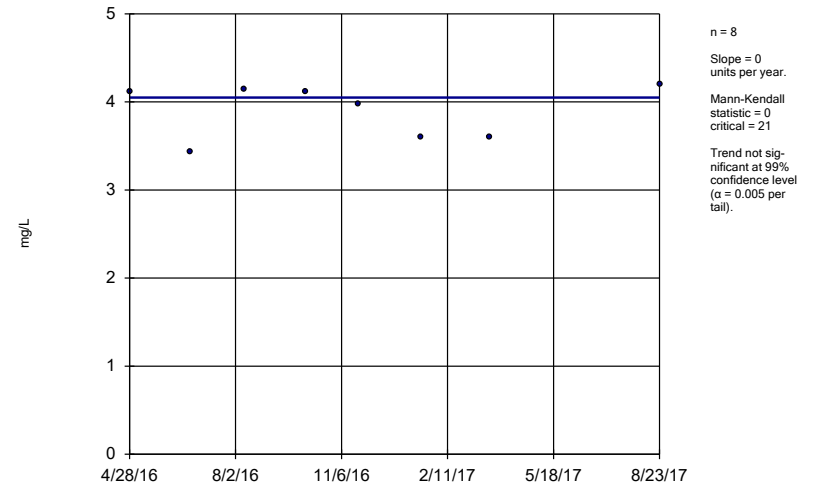
MW-10



Constituent: Chloride Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLs
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Sen's Slope Estimator

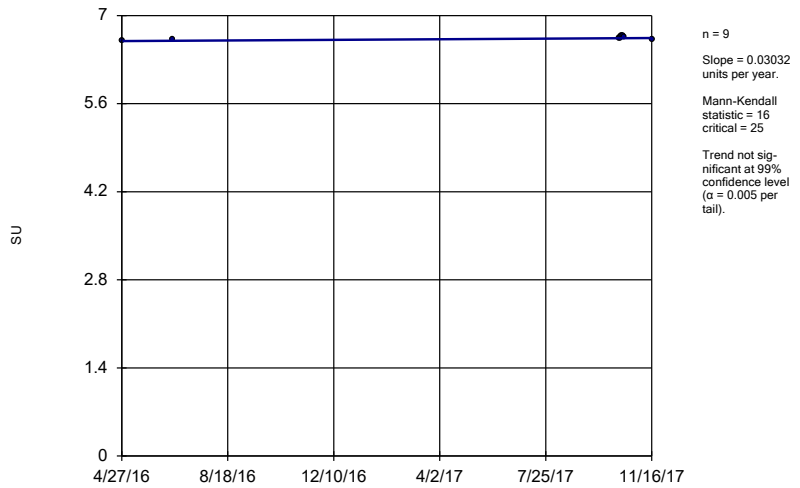
MW-12



Constituent: Chloride Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLs
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Sen's Slope Estimator

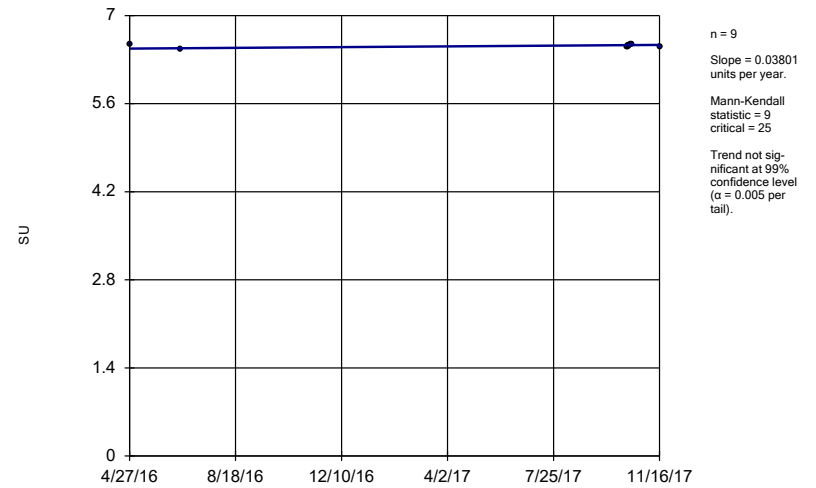
MW-7



Constituent: pH Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLs
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Sen's Slope Estimator

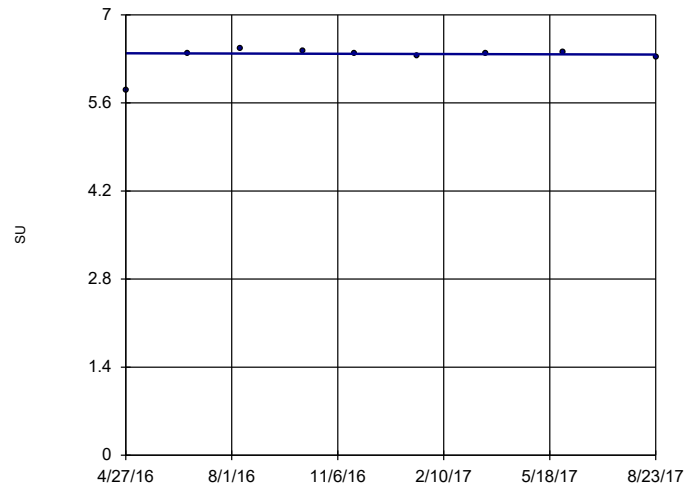
MW-8



Constituent: pH Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLs
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Sen's Slope Estimator

MW-10

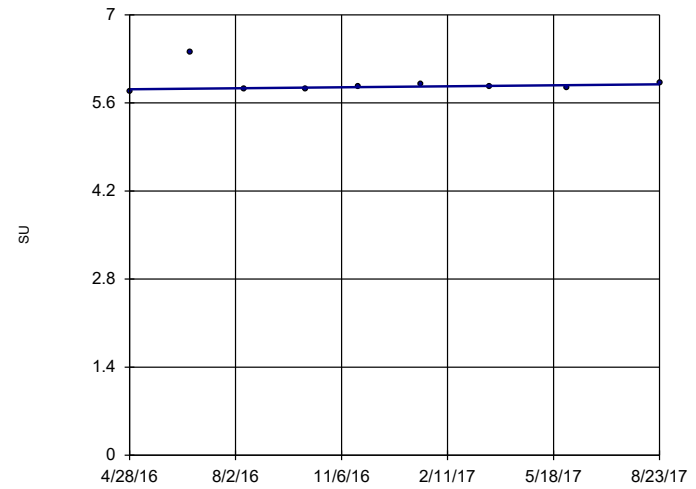


n = 9
Slope = -0.01534
units per year.
Mann-Kendall
statistic = -3
critical = -25
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: pH Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLs
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Sen's Slope Estimator

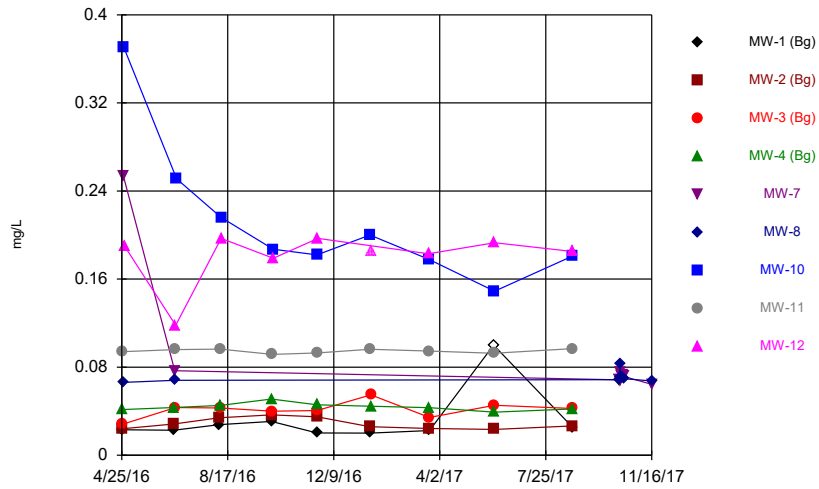
MW-12



n = 9
Slope = 0.0603
units per year.
Mann-Kendall
statistic = 11
critical = 25
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

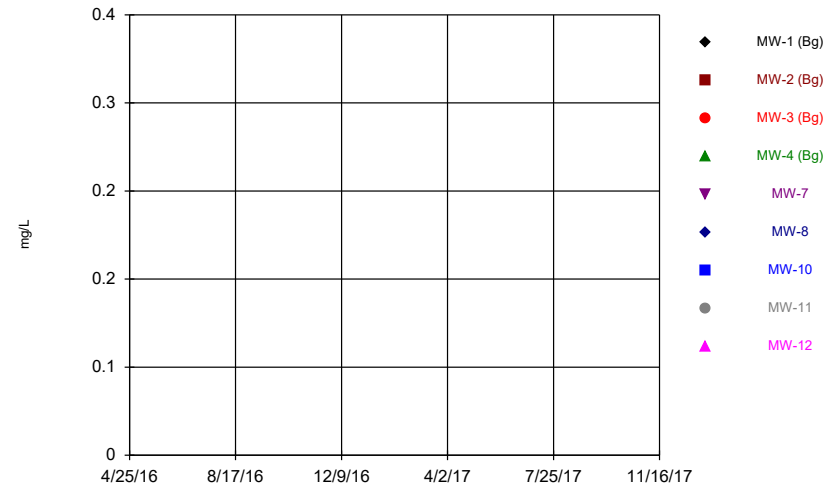
Constituent: pH Analysis Run 1/8/2018 11:03 AM View: Trend Tests - PLs
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Time Series



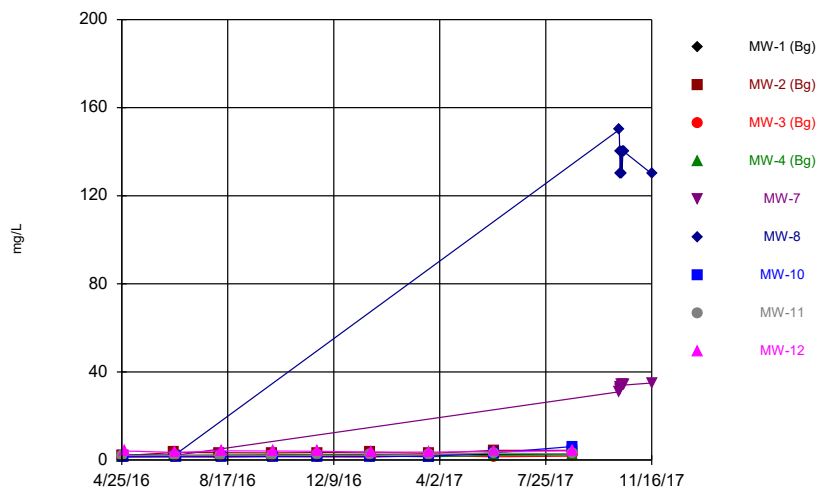
Constituent: Boron Analysis Run 1/5/2018 7:25 AM View: Descriptive - App III
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Time Series



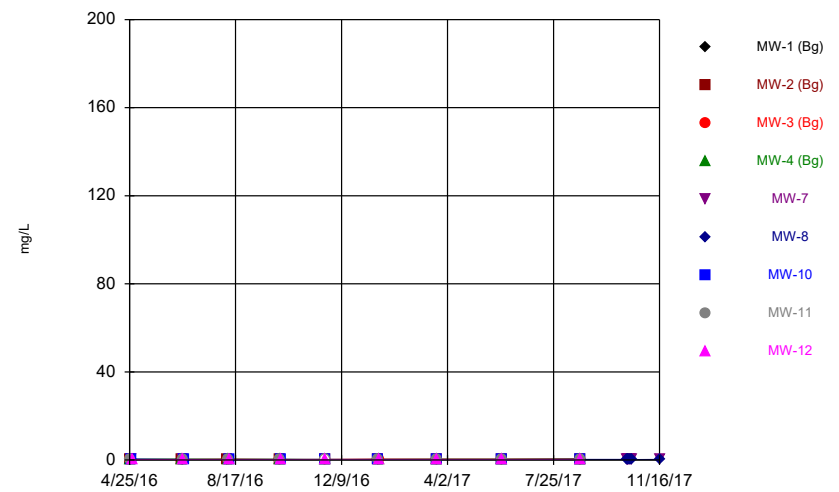
Constituent: Calcium Analysis Run 1/5/2018 7:25 AM View: Descriptive - App III
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Time Series



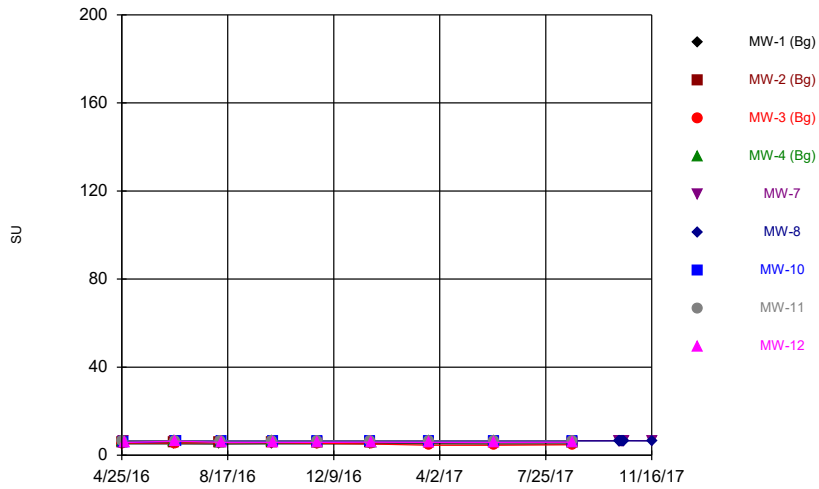
Constituent: Chloride Analysis Run 1/5/2018 7:25 AM View: Descriptive - App III
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Time Series



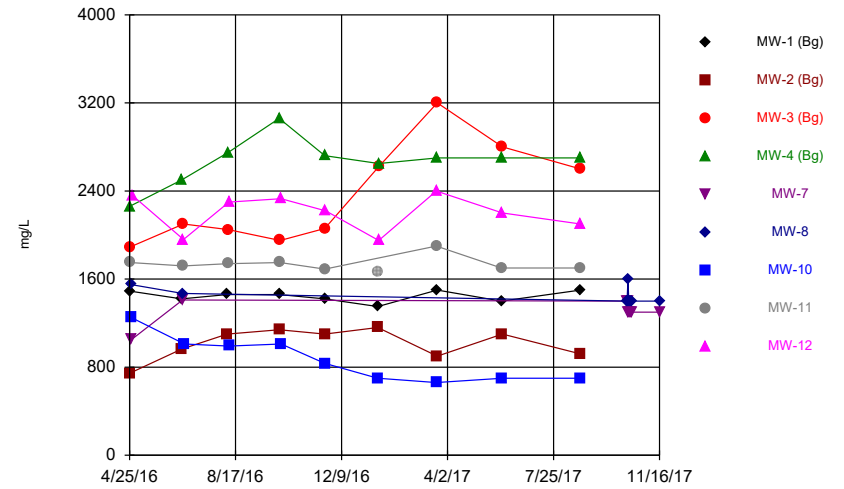
Constituent: Fluoride Analysis Run 1/5/2018 7:25 AM View: Descriptive - App III
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Time Series



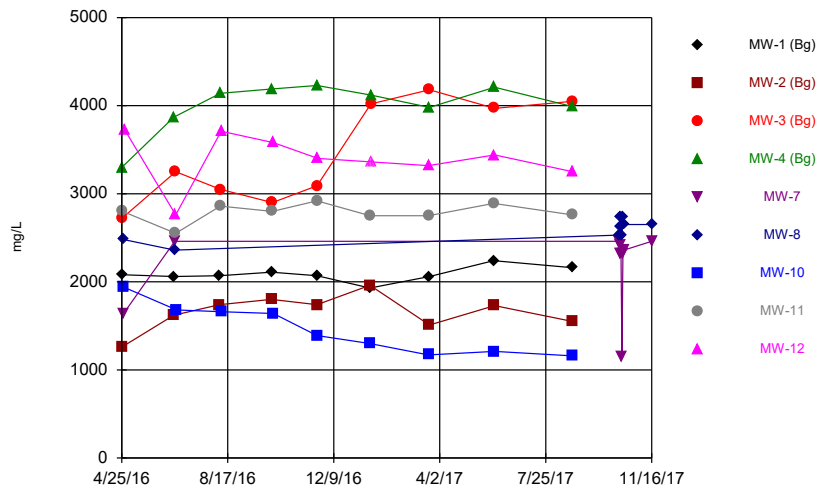
Constituent: pH Analysis Run 1/5/2018 7:25 AM View: Descriptive - App III
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Time Series



Constituent: Sulfate Analysis Run 1/5/2018 7:25 AM View: Descriptive - App III
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/5/2018 7:25 AM View: Descriptive - App III
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF