

**2017 ANNUAL GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT**

**MISSISSIPPI POWER COMPANY
PLANT VICTOR DANIEL
ASH POND B**

January 31, 2018

Prepared for

Mississippi Power Company
Gulfport, Mississippi

By

Southern Company Services
Earth Science and Environmental Engineering



CERTIFICATION STATEMENT

This 2017 Annual Groundwater Monitoring and Corrective Action Report, Mississippi Power Company – Plant Daniel Ash Pond B has been prepared in compliance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR 257 Subpart D) by a licensed professional geologist with Southern Company Services.



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Originator
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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 at Plant Daniel Ash Pond B and satisfies the requirements of 40 CFR §257.90(e). Semi-annual monitoring and reporting for Plant Daniel is performed in accordance with the monitoring requirements §257.90 through §257.94.

1.1 Site Location and Description

Mississippi Power Company's (MPC)'s Plant Daniel is located within Section 35, Township 5 South, Range 6 West, Sections 37, 10, 15, East half of Section 9, Southwest ¼ of Section 2, NW ¼ and south half of Section 11, and the north half and NW ¼ of the SW ¼ of Section 14, all of Township 6 South, Range 6 West. Plant Daniel is situated immediately northwest of the intersection of Mississippi State Highways 63 and 613, between the Pascagoula River to the west and Highway 63 to the east. The site address is 13201 Highway 63 N, Escatawpa, Mississippi 39562. Figure 1, Site Location Map, depicts the location of Plant Daniel relative to site features and the surrounding area.

The Ash Pond B is located along the south portion of the property. Figure 2, Site Plan and Well Location Map, depicts the general configuration of the Ash Pond B and the site monitoring well network.

1.2 Regional Geology & Hydrogeologic Setting

Jackson County lies in the Pascagoula River Drainage Basin in the Gulf Coastal Plain physiographic province. Topographically, the province is gently rolling to flat with local salt marshes. Rock outcrops are sedimentary in origin and range in age from late Miocene to Recent (Gandl, 1982). A dominant regional structural feature which affects the sediments of Miocene and younger age is the Gulf Coast geosyncline. The sediments dip toward the Gulf of Mexico. Where formations are near the surface, dips are from 15 to 35 feet/mile. Further from the outcrop, dips increase dramatically with depth. Fresh-water aquifers in the Pascagoula area are sand or sand and gravel beds of Miocene age or younger, generally less than 1,000 feet below the surface.

The surface geology of soils near Plant Daniel results from present-day weathering processes dictated by southern Mississippi's semi-tropical climate and the parent geologic materials. The soil profile formed from a wide variety of sediments of recent age, and from Pleistocene terrace deposits. The soils therefore contain sand, silt, clay, gravel and organics.

Studies prepared by Southern Company Services, establish five geologic units underlying the immediate Plant Daniel property:

- Unit 1 is a sandy clay aquitard. The unit is discontinuous across the Plant Daniel site and extends from the surface to approximately 32 feet deep in some areas.
- Unit 2 is a sand aquifer, which extends to approximately 70 feet and is considered the uppermost aquifer for groundwater monitoring purposes.
- Unit 3 is a clay aquitard underlying Unit 2 with thicknesses ranging from 2.5 to 9.5 feet at Plant Daniel.
- Unit 4 is a sand and gravel aquifer with a thickness of 34 feet or greater.
- Unit 5 is a clay aquitard.

Fifteen principal aquifers underlie about 75 percent of the state of Mississippi. Two aquifers supply water to the Pascagoula area. These are the Pliocene-age Citronelle and the Miocene Aquifer System, which includes the Graham Ferry Aquifer. Plant Daniel is located in the Citronelle outcrop area.

The Citronelle Aquifers are the shallowest aquifers in the Pascagoula area. Although principally a sand and gravel formation, the Citronelle is characterized by occasional lenses and layers of clay which may cause semi-artesian conditions. Sediments become coarse near the irregular contact with the underlying Pascagoula or Graham Ferry Formation. Also, the Citronelle and overlying coastal deposits are generally considered one hydrogeologic unit. The Citronelle is primarily a water table aquifer with a saturated thickness of about 45 feet. Recharge is primarily by rainfall which moves vertically and down dip to recharge underlying aquifers and to sustain local streams (Wasson, 1978).

1.3 Groundwater Monitoring System

Pursuant to §257.91, Plant Daniel has installed a groundwater monitoring system to monitor groundwater within the uppermost aquifer (Unit 2). The certified groundwater monitoring system for Ash Pond B 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 lateral and downgradient monitoring points based on groundwater flow direction as determined by Figure 3, Potentiometric Surface Contour Map – October 2017. Table 1, Monitoring Well Network Summary, presents details regarding the certified monitoring well network for Ash Pond B.

Table 1
Monitoring Well Network Summary

Well ID	Purpose	Installation Date	Northing	Easting	Total Hole Depth (feet)	Top of Casing Elevation (feet MSL)	Ground Elevation (feet MSL)	Top of Screen Elevation (feet MSL)	Bottom of Screen Elevation (feet MSL)
BAW-1	Upgradient	7/23/2015	378974.862	1071575.902	57.7	33.36	30.4	-21.90	-26.90
BAW-2	Upgradient	7/23/2015	378234.354	1071589.351	62.65	42.43	39.7	-11.80	-22.70
BAW-3	Downgradient	7/23/2015	377407.223	1071552.152	65.5	41.74	38.8	-15.50	-26.40
BAW-4	Downgradient	7/23/2015	377379.076	1071040.558	67.1	38.21	35.3	-20.50	-31.50
BAW-5	Downgradient	7/23/2015	377498.517	1070602.687	66.6	41.10	38.6	-17.70	-27.70
BAW-7	Downgradient	7/23/2015	378710.354	1071264.102	60.3	36.22	33.4	-16.80	-26.80

2.0 PRECEDING YEAR MONITORING ACTIVITIES

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 monitoring-related activities performed prior to 2017. All groundwater sampling was performed according to §257.93. Samples were collected from each well in the certified monitoring system shown on Figure 2.

Pursuant to §257.90(e)(3), Table 2, Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed for each well during the preceding year, as well as background samples collected prior to 2017. Table 2 also identifies the purpose of the sampling event (i.e., background data, detection monitoring event, verification event) as well as the status of each well (i.e, detection).

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	3/2016	5/2016	7/2016	9/2016	11/2016	1/2017	3/2017	5/2017	10/2017

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

2.1 Monitoring Well Installation and Maintenance

Monitoring well-related activities included installing a groundwater monitoring system for Ash Pond B during July 2015. In accordance with §257.91, a groundwater monitoring system has been installed that (1) consists of a sufficient number of wells, (2) installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) meets the performance standards of §257.91(a).

2.2 Background Groundwater Monitoring

In accordance with §257.94(b), Plant Daniel collected 8 independent samples from each background and downgradient well and analyzed for the constituents listed in Appendix III and Appendix IV.

Background sampling was performed over the period March 2016 through June 2017. Pursuant to §257.90(e)(3), analytical data reports for each of the background sampling events are included as Appendix A, Analytical Results.

2.3 Initial Detection Groundwater Sampling

Following background monitoring (and prior to October 17, 2017), the initial detection monitoring event was completed by collecting an additional round of groundwater samples. Groundwater samples were collected from each monitoring well and analyzed for Appendix III constituents according to §257.94(a). Data reports for the initial detection monitoring event are included in Appendix A.

3.0 SAMPLE METHODOLOGY & ANALYSES

The following describes the methods used to complete groundwater monitoring at Plant Daniel.

3.1 Groundwater Elevation Measurement

Prior to each sampling event, groundwater elevations were recorded from each monitoring well. Historic elevations are summarized on Table 3, Summary of Groundwater Elevations. Water level data from the initial detection monitoring event was used to develop a potentiometric surface elevation contour map shown as Figure 3. As shown on Figure 3, the general direction of groundwater flow across the site is toward the southwest to the Pascagoula River. The groundwater flow pattern observed during the October 2017 detection monitoring event is consistent with previous observations.

Table 3
Summary of Groundwater Elevations

Well ID	Top of Casing Elevation	Groundwater Elevations								
		(feet MSL)								
	(feet MSL)	3/21/16	5/16/16	7/11/16	9/12/16	11/16/16	1/16/17	3/20/17	5/22/17	10/16/2017
BAW-1	33.36	12.34	9.92	9.54	9.97	9.00	10.11	9.72	10.10	10.83
BAW-2	42.43	11.93	9.50	9.10	9.58	8.60	9.72	9.29	9.72	9.93
BAW-3	41.74	11.57	9.40	9.00	9.48	8.49	9.59	9.14	9.55	10.30
BAW-4	38.21	10.62	8.35	8.01	8.44	7.43	8.53	8.06	8.53	6.77
BAW-5	41.10	10.43	7.67	7.35	7.85	6.83	7.93	7.45	8.07	8.49
BAW-7	36.22	11.27	9.30	8.91	9.40	8.40	9.51	9.12	9.55	10.17

3.2 Groundwater Gradient and Flow Velocity

The groundwater flow velocity at Plant Daniel was calculated using a derivation of Darcy's Law. Specifically,

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

Where:

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

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

i = Horizontal hydraulic gradient

n_e = Effective porosity

TABLE 4: Groundwater Flow Velocity Calculations – October 2017

Flow Path		Hydraulic Gradient (I) (feet/feet)	Average Hydraulic Conductivity (K) (feet/day)	Assumed Effective Porosity (n_e)	Calculated Groundwater Flow Velocity (feet/day)	Calculated Groundwater Flow Velocity (feet/year)
October 2017	A	0.0013	25.09	0.2	0.16	58.4
	B	0.0019	25.09	0.2	0.24	87.6

Groundwater flow at the site is to the southwest. Groundwater monitoring wells BAW-1 and BAW-5 were used as points for calculating Flow Path A and BAW-3 and BAW-5 were used to calculate Flow Path B. As shown in Table 4, Groundwater Flow Velocity Calculations – October 2017, horizontal hydraulic gradients range from 0.00013 ft/ft to 0.0019 ft/ft. Hydraulic conductivity was calculated to be $8.8 * 10^{-3}$ cm/s (25.09 ft/day). The average linear velocity (i.e., rate of horizontal groundwater movement) was calculated to range from 0.16 to 0.24 ft/day (58.4 to 87.6 ft/year).

3.3 Groundwater Sampling

Groundwater samples were collected in accordance with §257.93(a). Each of the monitoring wells at Plant Daniel is equipped with a dedicated QED bladder 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 protocol.

3.4 Laboratory Analyses

Groundwater samples collected for background data included both Appendix III and Appendix IV parameters. Groundwater samples collected during the initial October 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. All laboratory analyses were performed by Test America, Inc. (TAL) of Pensacola, Florida. TAL is accredited by National Environmental Laboratory Accreditation Program (NELAP). TestAmerica maintains a NELAP certification for all parameters analyzed for this project. Groundwater analytical data and chain-of-custody records for the monitoring events are presented in Appendix A.

3.5 Quality Assurance and Quality Control Summary

During each sampling event, quality assurance and quality control (QA/QC) samples (field blanks) are collected at a rate of one sample per every 10 detection samples. QA/QC samples are analyzed for target constituents listed in the site groundwater monitoring plan. In addition, samplers prepared equipment blanks (where non- dedicated sampling equipment is used) and duplicate samples for quality control during each of the CCR sampling events. Data from these QA/QC samples is evaluated during data validation and kept in the site operating record. QA/QC analytical results are included as part of the laboratory analysis included in Appendix A.

Groundwater quality data in this report was independently validated in accordance with USEPA guidance (USEPA, 2011) and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences, post digestions 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 USEPA procedures as guidance (USEPA, 2017). Flagged data is identified in the statistical analysis reports described in the following section.

4.0 STATISTICAL ANALYSIS

The following describes statistical analysis of Appendix III groundwater monitoring data performed pursuant to §257.93(h).

4.1 Statistical Method

The Sanitas Groundwater statistical software was used to perform the statistical analyses. Sanitas is a decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the Unified Guidance (USEPA, 2009) document. Specific test information is provided below.

At Plant Daniel, an interwell prediction limit (PL) is used where upgradient well data is pooled to establish a background statistical limit. Data from the most recent sample from each downgradient well are compared to the prediction limit to determine whether any concentrations exceed background levels. The selected statistical method includes a 1-of-2 verification resample plan. When an initial statistically significant increase (SSI) or questionable result occurs, a second sample may be collected to verify the initial result or determine if the result was an outlier. When resampling is performed, an SSI is determined only if the resample verifies the initial exceedance (i.e. the resample also exceeds the PL). If resampling is not performed, the initial exceedance is a confirmed exceedance.

Parametric methods are utilized when pooled historical upgradient well data follow a normal or transformed-normal distribution. If the data cannot be normalized, or most of data are non-detects, a nonparametric test is utilized. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

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

- Statistical analyses are not required for analytes containing 100% non-detects (EPA Unified Guidance, 2009, Chapter 6).
- When data contain less than 15% non-detects in background, simple substitution of one-half the reporting limit may be 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. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

4.2 Statistical Analyses Results

Analytical data from the initial detection monitoring event in October 2017 was statistically analyzed using interwell comparisons, in accordance with the site's PE certified statistical analysis method, and as described in the preceding section. Statistical analysis was completed, and SSIs identified, on January 15, 2018. The statistical analysis and comparison to prediction limits are included as Appendix B, Statistical Analysis. Based on the statistical analysis, the following SSIs were identified:

- BAW-3: chloride.
- BAW-4: calcium and TDS.
- BAW-5: boron, calcium, chloride, pH, and Total Dissolved Solids.

Pursuant to §257.94(e), within 90 days of determining an SSI, Plant Daniel will either (1) prepare a demonstration that a source other than Ash Pond B was the cause, or (2) implement assessment monitoring per §257.95.

4.3 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. Plant Daniel is currently performing detection monitoring at Ash Pond B per §257.94 and has not implemented assessment monitoring. Therefore, statistical analysis of the Appendix IV data has not been performed.

5.0 MONITORING PROGRAM STATUS

Presently, Plant Daniel Ash Pond B is in detection monitoring. Initial SSIs of Appendix III parameters were identified during the statistical analysis of the October 2017 sampling. Plant Daniel will address the reported SSIs in accordance with the requirements of §257.94(e)(1-3) and (f).

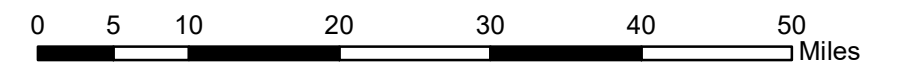
6.0 CONCLUSIONS & FUTURE ACTIONS

Statistical evaluations of the groundwater monitoring data for Ash Pond B identified initial SSIs of Appendix III groundwater monitoring parameters. In accordance with §257.94(e)(1-3), Plant Daniel will either (1) prepare a demonstration that a source other than Ash Pond B was the cause, or (2) implement assessment monitoring per §257.95. The next regularly scheduled semi-annual sampling event scheduled for April 2018.

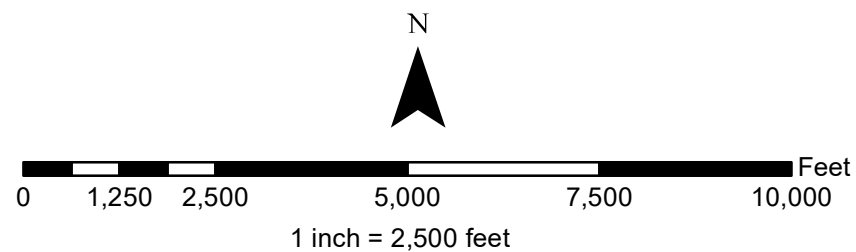
7.0 REFERENCES

- Gandl, L.A. “Characterization of Aquifers Designated as Potential Drinking Water Sources in Mississippi,” Water Resources Investigation Open-File Report 81-550, Mississippi Department of Natural Resources, Bureau of Pollution Control. 1982. 90 pp.
- 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. 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.
- USEPA. 2011. *Data Validation Standard Operating Procedures.* Science and Ecosystem Support Division. Region IV. Athens, GA. September.
- USEPA. 2017. National Functional Guidelines for Inorganic Superfund Methods Data Review. Office of Superfund Remediation and Technology Innovation. OLEM 9355.0-135 [EPA-540-R-2017-001]. Washington, DC. January.
- Wasson, B.E., 1978, Availability of additional ground-water supplies in the Pascagoula area, Mississippi: Mississippi Research and Development Center Bulletin, 32 p.

FIGURES



Legend	
	North Ash Management Unit (NAMU) Boundary
	Gypsum Storage Area (GSA) Boundary
	Ash Pond B Boundary
	Property Boundary (Approximate)



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Southern Company Services
Earth Science and Environmental Engineering

FOR

Mississippi Power Company

PLANT DANIEL
ASH POND B
FIGURE 1
SITE LOCATION MAP

Drawing Number ES4055S1



Legend

- Monitoring Well Location
- Ash Pond B Boundary
- Property Boundary (Approximate)
- Topographic Contour

N

0 125 250 500 750 1,000 Feet

1 inch = 250 feet

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**PLANT DANIEL
ASH POND B
FIGURE 2
SITE PLAN AND WELL LOCATION MAP**

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Earth Science and Environmental Engineering**

FOR

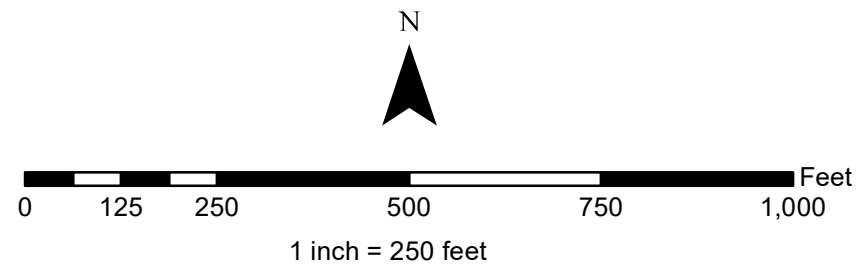
Mississippi Power Company

Drawing Number ES4055S2



Legend

- Monitoring Well Location
- Estimated Potentiometric Contour
- Approximate Direction of Groundwater Flow
- Ash Pond B Boundary
- Property Boundary (Approximate)



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**PLANT DANIEL
ASH POND B
FIGURE 3
POTENTIOMETRIC SURFACE
CONTOUR MAP - OCTOBER 2017**

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Drawing Number ES4055S3

APPENDIX - A

Groundwater Monitoring Data

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: 400-119192-2

TestAmerica Sample Delivery Group: Mississippi

Client Project/Site: CCR -Plant Daniel

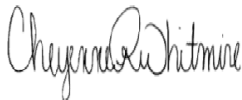
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

4/25/2016 4:27:49 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Job ID: 400-119192-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-119192-2

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 300390 and analytical batch 300704 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) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 300391 and analytical batch 300704 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) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for prep batch 300991 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) 7470A: The method blank for prep batch 300991 contained Mercury above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed.

General Chemistry

Method(s) SM 4500 Cl- E: The sample duplicate precision for the following sample associated with analytical batch 299259 was outside control limits: (400-119192-A-28 DU). Non-homogeneity of the sample matrix is suspected. interference suspected. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision met acceptance criteria.



Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: MW-14

Lab Sample ID: 400-119192-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.082		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	5.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0013	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0041	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	48		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	8.8		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.40				SU	1		Field Sampling	Total/NA
Field Temperature	20.13				Centigrade	1		Field Sampling	Total/NA

Client Sample ID: MW-11

Lab Sample ID: 400-119192-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.071		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00034	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	1.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0054		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0040	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	40		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	13		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.8	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.80				SU	1		Field Sampling	Total/NA
Field Temperature	20.47				Centigrade	1		Field Sampling	Total/NA

Client Sample ID: EB-02

Lab Sample ID: 400-119192-23

No Detections.

Client Sample ID: FB-02

Lab Sample ID: 400-119192-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000073	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: EB-03

Lab Sample ID: 400-119192-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000073	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: FB-03

Lab Sample ID: 400-119192-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.035		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.8		0.25	0.13	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: FB-03 (Continued)

Lab Sample ID: 400-119192-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000071	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: DUP-03

Lab Sample ID: 400-119192-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00070	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.036	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0013	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00091	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00035	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.043		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	42		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	8.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.040	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2.4	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.38				SU	1		Field Sampling	Total/NA
Field Temperature	23.16				Centigrade	1		Field Sampling	Total/NA

Client Sample ID: BAW-1

Lab Sample ID: 400-119192-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.00084	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.12				SU	1		Field Sampling	Total/NA
Field Temperature	23.97				Centigrade	1		Field Sampling	Total/NA

Client Sample ID: BAW-2

Lab Sample ID: 400-119192-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0019	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00041	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-2 (Continued)

Lab Sample ID: 400-119192-29

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
Field pH	5.52				SU	1		Field Sampling	Total/NA
Field Temperature	24.76				Centigrade	1		Field Sampling	Total/NA

Client Sample ID: BAW-3

Lab Sample ID: 400-119192-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00041	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0055		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00033	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.000084	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	7.3		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.05				SU	1		Field Sampling	Total/NA
Field Temperature	25.14				Centigrade	1		Field Sampling	Total/NA

Client Sample ID: BAW-4

Lab Sample ID: 400-119192-31

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00087	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.037	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0015	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00094	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00039	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.044		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000073	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	46		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	7.6		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.040	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2.3	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.38				SU	1		Field Sampling	Total/NA
Field Temperature	23.16				Centigrade	1		Field Sampling	Total/NA

Client Sample ID: BAW-5

Lab Sample ID: 400-119192-32

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-5 (Continued)

Lab Sample ID: 400-119192-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0033		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.22		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	18		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.17		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0026	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.000074	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	88		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	9.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	4.5	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.64				SU	1		Field Sampling	Total/NA
Field Temperature	22.98				Centigrade	1		Field Sampling	Total/NA

Client Sample ID: BAW-7

Lab Sample ID: 400-119192-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.65		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000071	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.89				SU	1		Field Sampling	Total/NA
Field Temperature	23.99				Centigrade	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
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
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
Field Sampling	Field Sampling	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

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

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

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

Laboratory References:

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

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

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-119192-21	MW-14	Water	03/23/16 07:45	03/24/16 08:50
400-119192-22	MW-11	Water	03/23/16 09:45	03/24/16 08:50
400-119192-23	EB-02	Water	03/23/16 07:00	03/24/16 08:50
400-119192-24	FB-02	Water	03/23/16 07:10	03/24/16 08:50
400-119192-25	EB-03	Water	03/23/16 15:57	03/24/16 08:50
400-119192-26	FB-03	Water	03/23/16 16:07	03/24/16 08:50
400-119192-27	DUP-03	Water	03/23/16 16:45	03/24/16 08:50
400-119192-28	BAW-1	Water	03/23/16 11:20	03/24/16 08:50
400-119192-29	BAW-2	Water	03/23/16 13:55	03/24/16 08:50
400-119192-30	BAW-3	Water	03/23/16 15:15	03/24/16 08:50
400-119192-31	BAW-4	Water	03/23/16 17:45	03/24/16 08:50
400-119192-32	BAW-5	Water	03/23/16 18:35	03/24/16 08:50
400-119192-33	BAW-7	Water	03/23/16 12:40	03/24/16 08:50

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: MW-14
Date Collected: 03/23/16 07:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-21
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 14:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 14:05	5
Barium	0.082		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 14:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:05	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 14:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:05	5
Calcium	5.9		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 14:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 14:05	5
Cobalt	0.0013	J	0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 14:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 14:05	5
Lithium	0.0041	J	0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 14:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 14:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 14:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 14:05	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070	F1	0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 14:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	48		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	8.8		2.0	0.60	mg/L			03/28/16 12:05	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 11:35	1
Sulfate	<1.4		5.0	1.4	mg/L			03/26/16 14:43	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.377		0.126	0.131	1.00	0.120	pCi/L	03/29/16 12:59	04/20/16 06:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					03/29/16 12:59	04/20/16 06:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.310	U	0.212	0.214	1.00	0.325	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	87.1		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.687		0.247	0.251	5.00	0.325	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
 SDG: Mississippi

Client Sample ID: MW-14
Date Collected: 03/23/16 07:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-21
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.40				SU			03/23/16 07:45	1
Field Temperature	20.13				Centigrade			03/23/16 07:45	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: MW-11
Date Collected: 03/23/16 09:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-22
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 14:09	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 14:09	5
Barium	0.071		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 14:09	5
Beryllium	0.00034	J	0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:09	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 14:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:09	5
Calcium	1.9		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 14:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 14:09	5
Cobalt	0.0054		0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 14:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 14:09	5
Lithium	0.0040	J	0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 14:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 14:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 14:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 14:09	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 14:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	13		2.0	0.60	mg/L			03/28/16 12:05	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 12:08	1
Sulfate	1.8	J	5.0	1.4	mg/L			03/26/16 14:43	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.301		0.116	0.119	1.00	0.121	pCi/L	03/29/16 12:59	04/20/16 06:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					03/29/16 12:59	04/20/16 06:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.304	U	0.275	0.277	1.00	0.444	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	89.0		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.606		0.299	0.301	5.00	0.444	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: MW-11
Date Collected: 03/23/16 09:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-22
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.80				SU			03/23/16 09:45	1
Field Temperature	20.47				Centigrade			03/23/16 09:45	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: EB-02
Date Collected: 03/23/16 07:00
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-23
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 14:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 14:14	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 14:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:14	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 14:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:14	5
Calcium	<0.13		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 14:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 14:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 14:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 14:14	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 14:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 14:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 14:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 14:14	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 14:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	<0.60		2.0	0.60	mg/L			03/28/16 12:05	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 12:11	1
Sulfate	<1.4		5.0	1.4	mg/L			03/26/16 14:43	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00670	U	0.0584	0.0584	1.00	0.124	pCi/L	03/29/16 12:59	04/20/16 06:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					03/29/16 12:59	04/20/16 06:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00424	U	0.202	0.202	1.00	0.366	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	87.9		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0109	U	0.211	0.211	5.00	0.366	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: FB-02
Date Collected: 03/23/16 07:10
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-24
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 14:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 14:18	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 14:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:18	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 14:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:18	5
Calcium	<0.13		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 14:18	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 14:18	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 14:18	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 14:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 14:18	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 14:18	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 14:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 14:18	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000073	J B	0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 14:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	<0.60		2.0	0.60	mg/L			03/28/16 12:05	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 12:14	1
Sulfate	<1.4		5.0	1.4	mg/L			03/26/16 14:43	1

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	0.109	0.109	1.00	0.187	pCi/L	03/29/16 12:59	04/20/16 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					03/29/16 12:59	04/20/16 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.130	U	0.203	0.203	1.00	0.342	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	85.6		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.193	U	0.230	0.230	5.00	0.342	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: EB-03
Date Collected: 03/23/16 15:57
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-25
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 14:22	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 14:22	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 14:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:22	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 14:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:22	5
Calcium	<0.13		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 14:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 14:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 14:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 14:22	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 14:22	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 14:22	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 14:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 14:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000073	J B	0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 14:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	<0.60		2.0	0.60	mg/L			03/28/16 12:05	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 12:18	1
Sulfate	<1.4		5.0	1.4	mg/L			03/28/16 13:23	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00173	U	0.0566	0.0566	1.00	0.118	pCi/L	03/29/16 12:59	04/20/16 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					03/29/16 12:59	04/20/16 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.236	U	0.240	0.241	1.00	0.389	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	80.7		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.237	U	0.246	0.247	5.00	0.389	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: FB-03
Date Collected: 03/23/16 16:07
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-26
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 14:27	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 14:27	5
Barium	0.035		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 14:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:27	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 14:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:27	5
Calcium	1.8		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 14:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 14:27	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 14:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 14:27	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 14:27	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 14:27	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 14:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 14:27	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000071	J B	0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 14:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	<0.60		2.0	0.60	mg/L			03/28/16 12:05	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 12:52	1
Sulfate	<1.4		5.0	1.4	mg/L			03/28/16 13:23	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0245	U	0.100	0.100	1.00	0.184	pCi/L	03/29/16 12:59	04/20/16 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					03/29/16 12:59	04/20/16 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.116	U	0.253	0.254	1.00	0.435	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	82.6		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.140	U	0.273	0.273	5.00	0.435	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: DUP-03
Date Collected: 03/23/16 16:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-27
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 14:32	5
Arsenic	0.00070	J	0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 14:32	5
Barium	0.010		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 14:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:32	5
Boron	0.036	J	0.050	0.021	mg/L		04/05/16 12:00	04/06/16 14:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:32	5
Calcium	3.7		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 14:32	5
Chromium	0.0013	J	0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 14:32	5
Cobalt	0.00091	J	0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 14:32	5
Lead	0.00035	J	0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 14:32	5
Lithium	0.043		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 14:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 14:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 14:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 14:32	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 14:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	42		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	8.2		2.0	0.60	mg/L			03/28/16 12:05	1
Fluoride	0.040	J	0.10	0.032	mg/L			04/12/16 12:54	1
Sulfate	2.4	J	5.0	1.4	mg/L			03/28/16 13:23	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0105	U	0.0976	0.0976	1.00	0.184	pCi/L	03/29/16 12:59	04/20/16 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					03/29/16 12:59	04/20/16 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0687	U	0.228	0.228	1.00	0.424	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	80.4		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0582	U	0.248	0.248	5.00	0.424	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
 SDG: Mississippi

Client Sample ID: DUP-03
Date Collected: 03/23/16 16:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-27
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.38				SU			03/23/16 16:45	1
Field Temperature	23.16				Centigrade			03/23/16 16:45	1

- 1
- 2
- 3
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- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-1
Date Collected: 03/23/16 11:20
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-28
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 14:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 14:36	5
Barium	0.00084	J	0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 14:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:36	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 14:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 14:36	5
Calcium	<0.13		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 14:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 14:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 14:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 14:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 14:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 14:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 14:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 14:36	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 15:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	6.5		2.0	0.60	mg/L			03/28/16 12:05	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 12:45	1
Sulfate	<1.4		5.0	1.4	mg/L			03/28/16 13:23	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.200		0.113	0.115	1.00	0.154	pCi/L	03/29/16 12:59	04/20/16 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					03/29/16 12:59	04/20/16 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.113	U	0.222	0.222	1.00	0.420	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	81.9		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0869	U	0.249	0.250	5.00	0.420	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
 SDG: Mississippi

Client Sample ID: BAW-1
Date Collected: 03/23/16 11:20
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-28
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.12				SU			03/23/16 11:20	1
Field Temperature	23.97				Centigrade			03/23/16 11:20	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-2
Date Collected: 03/23/16 13:55
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-29
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 17:21	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 17:21	5
Barium	0.027		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 17:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:21	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 17:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:21	5
Calcium	2.6		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 17:21	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 17:21	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 17:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 17:21	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 17:21	5
Molybdenum	0.0019	J	0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 17:21	5
Selenium	0.00041	J	0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 17:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 17:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 15:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	5.1		2.0	0.60	mg/L			03/28/16 12:07	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 12:56	1
Sulfate	<1.4		5.0	1.4	mg/L			03/28/16 13:23	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.216		0.122	0.124	1.00	0.169	pCi/L	03/29/16 12:59	04/20/16 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					03/29/16 12:59	04/20/16 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0626	U	0.262	0.262	1.00	0.456	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	82.2		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.279	U	0.289	0.289	5.00	0.456	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-2
Date Collected: 03/23/16 13:55
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-29
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.52				SU			03/23/16 13:55	1
Field Temperature	24.76				Centigrade			03/23/16 13:55	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-3
Date Collected: 03/23/16 15:15
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-30
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 17:26	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 17:26	5
Barium	0.013		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 17:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:26	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 17:26	5
Cadmium	0.00041	J	0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:26	5
Calcium	1.1		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 17:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 17:26	5
Cobalt	0.0055		0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 17:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 17:26	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 17:26	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 17:26	5
Selenium	0.00033	J	0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 17:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 17:26	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000084	J B	0.00020	0.000070	mg/L		04/11/16 09:35	04/12/16 15:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	7.3		2.0	0.60	mg/L			03/28/16 12:07	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 12:59	1
Sulfate	<1.4		5.0	1.4	mg/L			03/28/16 13:23	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00509	U	0.0620	0.0620	1.00	0.130	pCi/L	03/29/16 12:59	04/20/16 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					03/29/16 12:59	04/20/16 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.208	U	0.258	0.259	1.00	0.428	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	83.0		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.203	U	0.266	0.266	5.00	0.428	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-3
Date Collected: 03/23/16 15:15
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-30
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.05				SU			03/23/16 15:15	1
Field Temperature	25.14				Centigrade			03/23/16 15:15	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-4
Date Collected: 03/23/16 17:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-31
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 17:30	5
Arsenic	0.00087	J	0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 17:30	5
Barium	0.011		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 17:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:30	5
Boron	0.037	J	0.050	0.021	mg/L		04/05/16 12:00	04/06/16 17:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:30	5
Calcium	3.7		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 17:30	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 17:30	5
Cobalt	0.00094	J	0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 17:30	5
Lead	0.00039	J	0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 17:30	5
Lithium	0.044		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 17:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 17:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 17:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 17:30	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000073	J B	0.00020	0.000070	mg/L		04/11/16 09:37	04/12/16 15:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	46		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	7.6		2.0	0.60	mg/L			03/28/16 12:07	1
Fluoride	0.040	J	0.10	0.032	mg/L			04/12/16 13:01	1
Sulfate	2.3	J	5.0	1.4	mg/L			03/28/16 13:26	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0163	U	0.0837	0.0837	1.00	0.159	pCi/L	03/29/16 12:59	04/20/16 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					03/29/16 12:59	04/20/16 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.392	U	0.288	0.290	1.00	0.452	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	81.9		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.409	U	0.300	0.302	5.00	0.452	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-4
Date Collected: 03/23/16 17:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-31
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.38				SU			03/23/16 17:45	1
Field Temperature	23.16				Centigrade			03/23/16 17:45	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-5
Date Collected: 03/23/16 18:35
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-32
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 17:35	5
Arsenic	0.0033		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 17:35	5
Barium	0.044		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 17:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:35	5
Boron	0.22		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 17:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:35	5
Calcium	18		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 17:35	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 17:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 17:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 17:35	5
Lithium	0.17		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 17:35	5
Molybdenum	0.0026	J	0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 17:35	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 17:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 17:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000074	J B	0.00020	0.000070	mg/L		04/11/16 09:37	04/12/16 15:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	88		5.0	3.4	mg/L			03/25/16 17:03	1
Chloride	9.0		2.0	0.60	mg/L			03/28/16 12:07	1
Fluoride	0.060	J	0.10	0.032	mg/L			04/12/16 13:03	1
Sulfate	4.5	J	5.0	1.4	mg/L			03/28/16 13:26	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.201		0.105	0.107	1.00	0.130	pCi/L	03/29/16 12:59	04/20/16 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					03/29/16 12:59	04/20/16 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.348	U	0.265	0.267	1.00	0.417	pCi/L	03/29/16 13:28	04/18/16 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					03/29/16 13:28	04/18/16 11:46	1
Y Carrier	83.4		40 - 110					03/29/16 13:28	04/18/16 11:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.549		0.285	0.288	5.00	0.417	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-5
Date Collected: 03/23/16 18:35
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-32
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.64				SU			03/23/16 18:35	1
Field Temperature	22.98				Centigrade			03/23/16 18:35	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-7
Date Collected: 03/23/16 12:40
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-33
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 17:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 17:39	5
Barium	0.013		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 17:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:39	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 17:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:39	5
Calcium	0.65		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 17:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 17:39	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 17:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 17:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 17:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 17:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 17:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 17:39	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000071	J B	0.00020	0.000070	mg/L		04/11/16 09:37	04/12/16 15:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			03/27/16 12:22	1
Chloride	6.5		2.0	0.60	mg/L			03/28/16 12:07	1
Fluoride	<0.032		0.10	0.032	mg/L			04/12/16 13:06	1
Sulfate	<1.4		5.0	1.4	mg/L			03/28/16 13:26	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0907	U	0.105	0.105	1.00	0.172	pCi/L	03/29/16 12:59	04/20/16 07:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					03/29/16 12:59	04/20/16 07:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.214	U	0.235	0.236	1.00	0.386	pCi/L	03/29/16 13:28	04/18/16 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					03/29/16 13:28	04/18/16 11:47	1
Y Carrier	87.1		40 - 110					03/29/16 13:28	04/18/16 11:47	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.305	U	0.258	0.258	5.00	0.386	pCi/L		04/20/16 19:30	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-7
Date Collected: 03/23/16 12:40
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-33
Matrix: Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.89				SU			03/23/16 12:40	1
Field Temperature	23.99				Centigrade			03/23/16 12:40	1

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Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Qualifiers

Metals

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.
B	Compound was found in the blank and sample.
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.

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.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: MW-14
Date Collected: 03/23/16 07:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-21
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300390	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 14:05	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 14:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:05	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301346	04/12/16 11:35	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299120	03/26/16 14:43	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	302937	03/23/16 07:45	BWS	TAL PEN

Client Sample ID: MW-11
Date Collected: 03/23/16 09:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-22
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300390	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 14:09	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 14:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:05	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301346	04/12/16 12:08	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299120	03/26/16 14:43	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	302937	03/23/16 09:45	BWS	TAL PEN

Client Sample ID: EB-02
Date Collected: 03/23/16 07:00
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-23
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300390	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 14:14	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: EB-02
Date Collected: 03/23/16 07:00
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-23
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 14:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:05	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301346	04/12/16 12:11	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299120	03/26/16 14:43	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL

Client Sample ID: FB-02
Date Collected: 03/23/16 07:10
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-24
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300390	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 14:18	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 14:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:05	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301346	04/12/16 12:14	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299120	03/26/16 14:43	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL

Client Sample ID: EB-03
Date Collected: 03/23/16 15:57
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300390	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 14:22	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 14:57	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:05	LSS	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: EB-03
Date Collected: 03/23/16 15:57
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	301346	04/12/16 12:18	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299260	03/28/16 13:23	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL

Client Sample ID: FB-03
Date Collected: 03/23/16 16:07
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-26
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300390	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 14:27	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 14:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:05	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301366	04/12/16 12:52	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299260	03/28/16 13:23	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL

Client Sample ID: DUP-03
Date Collected: 03/23/16 16:45
Date Received: 03/24/16 08:50

Lab Sample ID: 400-119192-27
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300390	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 14:32	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 14:59	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:05	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301366	04/12/16 12:54	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299260	03/28/16 13:23	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:57	RTM	TAL SL

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: DUP-03

Lab Sample ID: 400-119192-27

Date Collected: 03/23/16 16:45

Matrix: Water

Date Received: 03/24/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	302937	03/23/16 16:45	BWS	TAL PEN

Client Sample ID: BAW-1

Lab Sample ID: 400-119192-28

Date Collected: 03/23/16 11:20

Matrix: Water

Date Received: 03/24/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300390	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 14:36	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 15:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:05	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301366	04/12/16 12:45	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299260	03/28/16 13:23	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	302937	03/23/16 11:20	BWS	TAL PEN

Client Sample ID: BAW-2

Lab Sample ID: 400-119192-29

Date Collected: 03/23/16 13:55

Matrix: Water

Date Received: 03/24/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300391	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 17:21	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 15:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:07	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301366	04/12/16 12:56	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299260	03/28/16 13:23	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-2

Lab Sample ID: 400-119192-29

Date Collected: 03/23/16 13:55

Matrix: Water

Date Received: 03/24/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	302937	03/23/16 13:55	BWS	TAL PEN

Client Sample ID: BAW-3

Lab Sample ID: 400-119192-30

Date Collected: 03/23/16 15:15

Matrix: Water

Date Received: 03/24/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300391	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 17:26	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:35	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 15:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	299259	03/28/16 12:07	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301366	04/12/16 12:59	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299260	03/28/16 13:23	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	302937	03/23/16 15:15	BWS	TAL PEN

Client Sample ID: BAW-4

Lab Sample ID: 400-119192-31

Date Collected: 03/23/16 17:45

Matrix: Water

Date Received: 03/24/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300391	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 17:30	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:37	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 15:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	299259	03/28/16 12:07	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301366	04/12/16 13:01	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299260	03/28/16 13:26	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	302937	03/23/16 17:45	BWS	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Client Sample ID: BAW-5

Lab Sample ID: 400-119192-32

Date Collected: 03/23/16 18:35

Matrix: Water

Date Received: 03/24/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300391	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 17:35	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:37	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 15:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299038	03/25/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:07	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301366	04/12/16 13:03	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299260	03/28/16 13:26	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246925	04/20/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	302937	03/23/16 18:35	BWS	TAL PEN

Client Sample ID: BAW-7

Lab Sample ID: 400-119192-33

Date Collected: 03/23/16 12:40

Matrix: Water

Date Received: 03/24/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			300391	04/05/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	300704	04/06/16 17:39	RJB	TAL PEN
Total/NA	Prep	7470A			300991	04/11/16 09:37	JAP	TAL PEN
Total/NA	Analysis	7470A		1	301435	04/12/16 15:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	299143	03/27/16 12:22	CAC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	299259	03/28/16 12:07	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	301366	04/12/16 13:06	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	299260	03/28/16 13:26	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			242739	03/29/16 12:59	MJS	TAL SL
Total/NA	Analysis	9315		1	246926	04/20/16 07:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			242746	03/29/16 13:28	MJS	TAL SL
Total/NA	Analysis	9320		1	246400	04/18/16 11:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246969	04/20/16 19:30	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	302937	03/23/16 12:40	BWS	TAL PEN

Laboratory References:

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

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

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Metals

Prep Batch: 300390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total Recoverable	Water	3005A	
400-119192-22	MW-11	Total Recoverable	Water	3005A	
400-119192-23	EB-02	Total Recoverable	Water	3005A	
400-119192-24	FB-02	Total Recoverable	Water	3005A	
400-119192-25	EB-03	Total Recoverable	Water	3005A	
400-119192-26	FB-03	Total Recoverable	Water	3005A	
400-119192-27	DUP-03	Total Recoverable	Water	3005A	
400-119192-28	BAW-1	Total Recoverable	Water	3005A	
400-119435-G-12-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-119435-G-12-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
LCS 400-300390/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
MB 400-300390/1-A ^5	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 300391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-29	BAW-2	Total Recoverable	Water	3005A	
400-119192-30	BAW-3	Total Recoverable	Water	3005A	
400-119192-31	BAW-4	Total Recoverable	Water	3005A	
400-119192-32	BAW-5	Total Recoverable	Water	3005A	
400-119192-33	BAW-7	Total Recoverable	Water	3005A	
400-119582-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-119582-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
LCS 400-300391/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
MB 400-300391/1-A ^5	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 300704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total Recoverable	Water	6020	300390
400-119192-22	MW-11	Total Recoverable	Water	6020	300390
400-119192-23	EB-02	Total Recoverable	Water	6020	300390
400-119192-24	FB-02	Total Recoverable	Water	6020	300390
400-119192-25	EB-03	Total Recoverable	Water	6020	300390
400-119192-26	FB-03	Total Recoverable	Water	6020	300390
400-119192-27	DUP-03	Total Recoverable	Water	6020	300390
400-119192-28	BAW-1	Total Recoverable	Water	6020	300390
400-119192-29	BAW-2	Total Recoverable	Water	6020	300391
400-119192-30	BAW-3	Total Recoverable	Water	6020	300391
400-119192-31	BAW-4	Total Recoverable	Water	6020	300391
400-119192-32	BAW-5	Total Recoverable	Water	6020	300391
400-119192-33	BAW-7	Total Recoverable	Water	6020	300391
400-119435-G-12-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	300390
400-119435-G-12-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	300390
400-119582-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	300391
400-119582-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	300391
LCS 400-300390/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	300390
LCS 400-300391/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	300391
MB 400-300390/1-A ^5	Method Blank	Total Recoverable	Water	6020	300390
MB 400-300391/1-A ^5	Method Blank	Total Recoverable	Water	6020	300391
MRL 400-300704/21	Lab Control Sample	Total/NA	Water	6020	

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Metals (Continued)

Prep Batch: 300991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total/NA	Water	7470A	
400-119192-21 MS	MW-14	Total/NA	Water	7470A	
400-119192-21 MSD	MW-14	Total/NA	Water	7470A	
400-119192-22	MW-11	Total/NA	Water	7470A	
400-119192-23	EB-02	Total/NA	Water	7470A	
400-119192-24	FB-02	Total/NA	Water	7470A	
400-119192-25	EB-03	Total/NA	Water	7470A	
400-119192-26	FB-03	Total/NA	Water	7470A	
400-119192-27	DUP-03	Total/NA	Water	7470A	
400-119192-28	BAW-1	Total/NA	Water	7470A	
400-119192-29	BAW-2	Total/NA	Water	7470A	
400-119192-30	BAW-3	Total/NA	Water	7470A	
400-119192-31	BAW-4	Total/NA	Water	7470A	
400-119192-32	BAW-5	Total/NA	Water	7470A	
400-119192-33	BAW-7	Total/NA	Water	7470A	
LCS 400-300991/15-A	Lab Control Sample	Total/NA	Water	7470A	
MB 400-300991/14-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 301435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total/NA	Water	7470A	300991
400-119192-21 MS	MW-14	Total/NA	Water	7470A	300991
400-119192-21 MSD	MW-14	Total/NA	Water	7470A	300991
400-119192-22	MW-11	Total/NA	Water	7470A	300991
400-119192-23	EB-02	Total/NA	Water	7470A	300991
400-119192-24	FB-02	Total/NA	Water	7470A	300991
400-119192-25	EB-03	Total/NA	Water	7470A	300991
400-119192-26	FB-03	Total/NA	Water	7470A	300991
400-119192-27	DUP-03	Total/NA	Water	7470A	300991
400-119192-28	BAW-1	Total/NA	Water	7470A	300991
400-119192-29	BAW-2	Total/NA	Water	7470A	300991
400-119192-30	BAW-3	Total/NA	Water	7470A	300991
400-119192-31	BAW-4	Total/NA	Water	7470A	300991
400-119192-32	BAW-5	Total/NA	Water	7470A	300991
400-119192-33	BAW-7	Total/NA	Water	7470A	300991
LCS 400-300991/15-A	Lab Control Sample	Total/NA	Water	7470A	300991
MB 400-300991/14-A	Method Blank	Total/NA	Water	7470A	300991

General Chemistry

Analysis Batch: 299038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total/NA	Water	SM 2540C	
400-119192-22	MW-11	Total/NA	Water	SM 2540C	
400-119192-23	EB-02	Total/NA	Water	SM 2540C	
400-119192-24	FB-02	Total/NA	Water	SM 2540C	
400-119192-25	EB-03	Total/NA	Water	SM 2540C	
400-119192-26	FB-03	Total/NA	Water	SM 2540C	
400-119192-27	DUP-03	Total/NA	Water	SM 2540C	
400-119192-28	BAW-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

General Chemistry (Continued)

Analysis Batch: 299038 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-28 DU	BAW-1	Total/NA	Water	SM 2540C	
400-119192-29	BAW-2	Total/NA	Water	SM 2540C	
400-119192-30	BAW-3	Total/NA	Water	SM 2540C	
400-119192-31	BAW-4	Total/NA	Water	SM 2540C	
400-119192-32	BAW-5	Total/NA	Water	SM 2540C	
LCS 400-299038/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 400-299038/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 299120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total/NA	Water	SM 4500 SO4 E	
400-119192-22	MW-11	Total/NA	Water	SM 4500 SO4 E	
400-119192-23	EB-02	Total/NA	Water	SM 4500 SO4 E	
400-119192-24	FB-02	Total/NA	Water	SM 4500 SO4 E	
400-119192-A-7 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-119192-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-119192-A-14 DU	Duplicate	Total/NA	Water	SM 4500 SO4 E	
LCS 400-299120/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MB 400-299120/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 299143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-33	BAW-7	Total/NA	Water	SM 2540C	
400-119212-G-20 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 400-299143/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 400-299143/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 299259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total/NA	Water	SM 4500 CI- E	
400-119192-22	MW-11	Total/NA	Water	SM 4500 CI- E	
400-119192-23	EB-02	Total/NA	Water	SM 4500 CI- E	
400-119192-23 MS	EB-02	Total/NA	Water	SM 4500 CI- E	
400-119192-23 MSD	EB-02	Total/NA	Water	SM 4500 CI- E	
400-119192-24	FB-02	Total/NA	Water	SM 4500 CI- E	
400-119192-25	EB-03	Total/NA	Water	SM 4500 CI- E	
400-119192-26	FB-03	Total/NA	Water	SM 4500 CI- E	
400-119192-27	DUP-03	Total/NA	Water	SM 4500 CI- E	
400-119192-28	BAW-1	Total/NA	Water	SM 4500 CI- E	
400-119192-28 DU	BAW-1	Total/NA	Water	SM 4500 CI- E	
400-119192-29	BAW-2	Total/NA	Water	SM 4500 CI- E	
400-119192-30	BAW-3	Total/NA	Water	SM 4500 CI- E	
400-119192-31	BAW-4	Total/NA	Water	SM 4500 CI- E	
400-119192-32	BAW-5	Total/NA	Water	SM 4500 CI- E	
400-119192-33	BAW-7	Total/NA	Water	SM 4500 CI- E	
LCS 400-299259/7	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MB 400-299259/6	Method Blank	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 299260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-25	EB-03	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

General Chemistry (Continued)

Analysis Batch: 299260 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-26	FB-03	Total/NA	Water	SM 4500 SO4 E	
400-119192-27	DUP-03	Total/NA	Water	SM 4500 SO4 E	
400-119192-28	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-119192-29	BAW-2	Total/NA	Water	SM 4500 SO4 E	
400-119192-30	BAW-3	Total/NA	Water	SM 4500 SO4 E	
400-119192-31	BAW-4	Total/NA	Water	SM 4500 SO4 E	
400-119192-32	BAW-5	Total/NA	Water	SM 4500 SO4 E	
400-119192-32 DU	BAW-5	Total/NA	Water	SM 4500 SO4 E	
400-119192-33	BAW-7	Total/NA	Water	SM 4500 SO4 E	
660-72838-H-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
660-72838-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
LCS 400-299260/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MB 400-299260/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 301346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total/NA	Water	SM 4500 F C	
400-119192-21 DU	MW-14	Total/NA	Water	SM 4500 F C	
400-119192-22	MW-11	Total/NA	Water	SM 4500 F C	
400-119192-23	EB-02	Total/NA	Water	SM 4500 F C	
400-119192-24	FB-02	Total/NA	Water	SM 4500 F C	
400-119192-25	EB-03	Total/NA	Water	SM 4500 F C	
400-119192-A-10 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-119192-A-10 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
LCS 400-301346/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MB 400-301346/3	Method Blank	Total/NA	Water	SM 4500 F C	

Analysis Batch: 301366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-26	FB-03	Total/NA	Water	SM 4500 F C	
400-119192-27	DUP-03	Total/NA	Water	SM 4500 F C	
400-119192-28	BAW-1	Total/NA	Water	SM 4500 F C	
400-119192-28 MS	BAW-1	Total/NA	Water	SM 4500 F C	
400-119192-28 MSD	BAW-1	Total/NA	Water	SM 4500 F C	
400-119192-29	BAW-2	Total/NA	Water	SM 4500 F C	
400-119192-30	BAW-3	Total/NA	Water	SM 4500 F C	
400-119192-31	BAW-4	Total/NA	Water	SM 4500 F C	
400-119192-32	BAW-5	Total/NA	Water	SM 4500 F C	
400-119192-33	BAW-7	Total/NA	Water	SM 4500 F C	
400-119722-A-1 DU	Duplicate	Total/NA	Water	SM 4500 F C	
LCS 400-301366/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MB 400-301366/3	Method Blank	Total/NA	Water	SM 4500 F C	

Rad

Prep Batch: 242739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total/NA	Water	PrecSep-21	
400-119192-22	MW-11	Total/NA	Water	PrecSep-21	
400-119192-23	EB-02	Total/NA	Water	PrecSep-21	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Rad (Continued)

Prep Batch: 242739 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-24	FB-02	Total/NA	Water	PrecSep-21	
400-119192-25	EB-03	Total/NA	Water	PrecSep-21	
400-119192-26	FB-03	Total/NA	Water	PrecSep-21	
400-119192-27	DUP-03	Total/NA	Water	PrecSep-21	
400-119192-28	BAW-1	Total/NA	Water	PrecSep-21	
400-119192-29	BAW-2	Total/NA	Water	PrecSep-21	
400-119192-30	BAW-3	Total/NA	Water	PrecSep-21	
400-119192-31	BAW-4	Total/NA	Water	PrecSep-21	
400-119192-32	BAW-5	Total/NA	Water	PrecSep-21	
400-119192-33	BAW-7	Total/NA	Water	PrecSep-21	
490-99915-A-2-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	
490-99915-A-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	
LCS 160-242739/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-242739/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 242746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total/NA	Water	PrecSep_0	
400-119192-22	MW-11	Total/NA	Water	PrecSep_0	
400-119192-23	EB-02	Total/NA	Water	PrecSep_0	
400-119192-24	FB-02	Total/NA	Water	PrecSep_0	
400-119192-25	EB-03	Total/NA	Water	PrecSep_0	
400-119192-26	FB-03	Total/NA	Water	PrecSep_0	
400-119192-27	DUP-03	Total/NA	Water	PrecSep_0	
400-119192-28	BAW-1	Total/NA	Water	PrecSep_0	
400-119192-29	BAW-2	Total/NA	Water	PrecSep_0	
400-119192-30	BAW-3	Total/NA	Water	PrecSep_0	
400-119192-31	BAW-4	Total/NA	Water	PrecSep_0	
400-119192-32	BAW-5	Total/NA	Water	PrecSep_0	
400-119192-33	BAW-7	Total/NA	Water	PrecSep_0	
490-99915-A-2-C MS	Matrix Spike	Total/NA	Water	PrecSep_0	
490-99915-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	
LCS 160-242746/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-242746/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 302937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-119192-21	MW-14	Total/NA	Water	Field Sampling	
400-119192-22	MW-11	Total/NA	Water	Field Sampling	
400-119192-27	DUP-03	Total/NA	Water	Field Sampling	
400-119192-28	BAW-1	Total/NA	Water	Field Sampling	
400-119192-29	BAW-2	Total/NA	Water	Field Sampling	
400-119192-30	BAW-3	Total/NA	Water	Field Sampling	
400-119192-31	BAW-4	Total/NA	Water	Field Sampling	
400-119192-32	BAW-5	Total/NA	Water	Field Sampling	
400-119192-33	BAW-7	Total/NA	Water	Field Sampling	

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MRL 400-300704/21
Matrix: Water
Analysis Batch: 300704

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.409	J	ug/L		82	50 - 150
Arsenic	0.250	<0.33		ug/L		106	50 - 150
Barium	0.500	0.460	J	ug/L		92	50 - 150
Beryllium	0.250	0.254	J	ug/L		102	50 - 150
Boron	5.00	<18		ug/L		87	50 - 150
Cadmium	0.250	0.267	J	ug/L		107	50 - 150
Calcium	50.0	<130		ug/L		107	50 - 150
Chromium	0.500	0.475	J	ug/L		95	50 - 150
Cobalt	0.500	0.512	J	ug/L		102	50 - 150
Lead	0.250	<0.33		ug/L		97	50 - 150
Lithium	0.500	<1.6		ug/L		142	50 - 150
Molybdenum	0.500	0.496	J	ug/L		99	50 - 150
Selenium	0.250	<0.23		ug/L		88	50 - 150
Thallium	0.100	0.101	J	ug/L		101	50 - 150

Lab Sample ID: MB 400-300390/1-A ^5
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 300390

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 12:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 12:07	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 12:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 12:07	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 12:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 12:07	5
Calcium	<0.13		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 12:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 12:07	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 12:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 12:07	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 12:07	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 12:07	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 12:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 12:07	5

Lab Sample ID: LCS 400-300390/2-A ^1
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 300390

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0499		mg/L		100	80 - 120
Arsenic	0.0500	0.0484		mg/L		97	80 - 120
Barium	0.0500	0.0464		mg/L		93	80 - 120
Beryllium	0.0500	0.0476		mg/L		95	80 - 120
Boron	0.100	0.0981		mg/L		98	80 - 120
Cadmium	0.0500	0.0473		mg/L		95	80 - 120
Calcium	5.00	4.89		mg/L		98	80 - 120
Chromium	0.0500	0.0468		mg/L		94	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-300390/2-A ^1
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 300390

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0500	0.0487		mg/L		97	80 - 120
Lead	0.0500	0.0475		mg/L		95	80 - 120
Lithium	0.0500	0.0480		mg/L		96	80 - 120
Molybdenum	0.0500	0.0475		mg/L		95	80 - 120
Selenium	0.0500	0.0490		mg/L		98	80 - 120
Thallium	0.0100	0.00973		mg/L		97	80 - 120

Lab Sample ID: 400-119435-G-12-B MS ^5
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 300390

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0569		mg/L		114	75 - 125
Arsenic	<0.00046		0.0500	0.0498		mg/L		100	75 - 125
Barium	0.094		0.0500	0.142		mg/L		97	75 - 125
Beryllium	<0.00034		0.0500	0.0485		mg/L		97	75 - 125
Boron	<0.021		0.100	0.119		mg/L		119	75 - 125
Cadmium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125
Calcium	1.8		5.00	6.74		mg/L		99	75 - 125
Chromium	0.0025		0.0500	0.0506		mg/L		96	75 - 125
Cobalt	0.0020	J	0.0500	0.0518		mg/L		100	75 - 125
Lead	<0.00035		0.0500	0.0465		mg/L		93	75 - 125
Lithium	<0.0032	F1	0.0500	0.0649	F1	mg/L		130	75 - 125
Molybdenum	<0.00085		0.0500	0.0481		mg/L		96	75 - 125
Selenium	0.00028	J	0.0500	0.0498		mg/L		99	75 - 125
Thallium	<0.00085		0.0100	0.0100		mg/L		100	75 - 125

Lab Sample ID: 400-119435-G-12-C MSD ^5
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 300390

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0010		0.0500	0.0529		mg/L		106	75 - 125	7	20
Arsenic	<0.00046		0.0500	0.0503		mg/L		101	75 - 125	1	20
Barium	0.094		0.0500	0.141		mg/L		95	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0498		mg/L		100	75 - 125	3	20
Boron	<0.021		0.100	0.122		mg/L		122	75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0491		mg/L		98	75 - 125	5	20
Calcium	1.8		5.00	6.67		mg/L		98	75 - 125	1	20
Chromium	0.0025		0.0500	0.0509		mg/L		97	75 - 125	1	20
Cobalt	0.0020	J	0.0500	0.0523		mg/L		101	75 - 125	1	20
Lead	<0.00035		0.0500	0.0477		mg/L		95	75 - 125	2	20
Lithium	<0.0032	F1	0.0500	0.0647	F1	mg/L		129	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0486		mg/L		97	75 - 125	1	20
Selenium	0.00028	J	0.0500	0.0504		mg/L		100	75 - 125	1	20
Thallium	<0.00085		0.0100	0.00991		mg/L		99	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 400-300391/1-A ^5
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 300391

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/05/16 12:00	04/06/16 17:12	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/05/16 12:00	04/06/16 17:12	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/05/16 12:00	04/06/16 17:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:12	5
Boron	<0.021		0.050	0.021	mg/L		04/05/16 12:00	04/06/16 17:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/05/16 12:00	04/06/16 17:12	5
Calcium	<0.13		0.25	0.13	mg/L		04/05/16 12:00	04/06/16 17:12	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/05/16 12:00	04/06/16 17:12	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/05/16 12:00	04/06/16 17:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/05/16 12:00	04/06/16 17:12	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/05/16 12:00	04/06/16 17:12	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/05/16 12:00	04/06/16 17:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/05/16 12:00	04/06/16 17:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/05/16 12:00	04/06/16 17:12	5

Lab Sample ID: LCS 400-300391/2-A ^1
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 300391

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0512		mg/L		102	80 - 120
Arsenic	0.0500	0.0486		mg/L		97	80 - 120
Barium	0.0500	0.0465		mg/L		93	80 - 120
Beryllium	0.0500	0.0466		mg/L		93	80 - 120
Boron	0.100	0.0965		mg/L		97	80 - 120
Cadmium	0.0500	0.0489		mg/L		98	80 - 120
Calcium	5.00	4.93		mg/L		99	80 - 120
Chromium	0.0500	0.0472		mg/L		94	80 - 120
Cobalt	0.0500	0.0487		mg/L		97	80 - 120
Lead	0.0500	0.0473		mg/L		95	80 - 120
Lithium	0.0500	0.0474		mg/L		95	80 - 120
Molybdenum	0.0500	0.0474		mg/L		95	80 - 120
Selenium	0.0500	0.0494		mg/L		99	80 - 120
Thallium	0.0100	0.00958		mg/L		96	80 - 120

Lab Sample ID: 400-119582-B-1-B MS ^5
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 300391

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0566		mg/L		113	75 - 125
Arsenic	0.00072	J	0.0500	0.0507		mg/L		100	75 - 125
Barium	0.11		0.0500	0.156		mg/L		97	75 - 125
Beryllium	<0.00034		0.0500	0.0494		mg/L		99	75 - 125
Boron	<0.021	F1	0.100	0.128	F1	mg/L		128	75 - 125
Cadmium	<0.00034		0.0500	0.0493		mg/L		99	75 - 125
Calcium	26		5.00	30.2	4	mg/L		93	75 - 125
Chromium	<0.0011		0.0500	0.0480		mg/L		96	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-119582-B-1-B MS ^5
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 300391

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Cobalt	0.010		0.0500	0.0600		mg/L		99		75 - 125
Lead	<0.00035		0.0500	0.0468		mg/L		94		75 - 125
Lithium	<0.0032	F1	0.0500	0.0659	F1	mg/L		132		75 - 125
Molybdenum	<0.00085		0.0500	0.0495		mg/L		99		75 - 125
Selenium	<0.00024		0.0500	0.0512		mg/L		102		75 - 125
Thallium	<0.000085		0.0100	0.0100		mg/L		100		75 - 125

Lab Sample ID: 400-119582-B-1-C MSD ^5
Matrix: Water
Analysis Batch: 300704

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 300391

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<0.0010		0.0500	0.0535		mg/L		107		75 - 125	6	20
Arsenic	0.00072	J	0.0500	0.0502		mg/L		99		75 - 125	1	20
Barium	0.11		0.0500	0.153		mg/L		92		75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0489		mg/L		98		75 - 125	1	20
Boron	<0.021	F1	0.100	0.122		mg/L		122		75 - 125	5	20
Cadmium	<0.00034		0.0500	0.0494		mg/L		99		75 - 125	0	20
Calcium	26		5.00	30.5	4	mg/L		100		75 - 125	1	20
Chromium	<0.0011		0.0500	0.0485		mg/L		97		75 - 125	1	20
Cobalt	0.010		0.0500	0.0610		mg/L		101		75 - 125	2	20
Lead	<0.00035		0.0500	0.0466		mg/L		93		75 - 125	1	20
Lithium	<0.0032	F1	0.0500	0.0670	F1	mg/L		134		75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0493		mg/L		99		75 - 125	0	20
Selenium	<0.00024		0.0500	0.0509		mg/L		102		75 - 125	0	20
Thallium	<0.000085		0.0100	0.00996		mg/L		100		75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-300991/14-A
Matrix: Water
Analysis Batch: 301435

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 300991

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.0000738	J	0.00020	0.000070	mg/L		04/08/16 15:50	04/12/16 14:27	1

Lab Sample ID: LCS 400-300991/15-A
Matrix: Water
Analysis Batch: 301435

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 300991

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
Mercury	0.00101	0.000940		mg/L		93		80 - 120

Lab Sample ID: 400-119192-21 MS
Matrix: Water
Analysis Batch: 301435

Client Sample ID: MW-14
Prep Type: Total/NA
Prep Batch: 300991

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Mercury	<0.000070	F1	0.00201	0.00153	F1	mg/L		76		80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Lab Sample ID: 400-119192-21 MSD
Matrix: Water
Analysis Batch: 301435

Client Sample ID: MW-14
Prep Type: Total/NA
Prep Batch: 300991

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070	F1	0.00201	0.00146	F1	mg/L		73	80 - 120	5	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-299038/1
Matrix: Water
Analysis Batch: 299038

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/25/16 17:03	1

Lab Sample ID: LCS 400-299038/2
Matrix: Water
Analysis Batch: 299038

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	276		mg/L		94	78 - 122

Lab Sample ID: 400-119192-28 DU
Matrix: Water
Analysis Batch: 299038

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	20		20.0		mg/L		0	5

Lab Sample ID: MB 400-299143/1
Matrix: Water
Analysis Batch: 299143

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/27/16 12:22	1

Lab Sample ID: LCS 400-299143/2
Matrix: Water
Analysis Batch: 299143

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	274		mg/L		94	78 - 122

Lab Sample ID: 400-119212-G-20 DU
Matrix: Water
Analysis Batch: 299143

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	22		22.0		mg/L		0	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-299259/6
Matrix: Water
Analysis Batch: 299259

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			03/28/16 10:59	1

Lab Sample ID: LCS 400-299259/7
Matrix: Water
Analysis Batch: 299259

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.5		mg/L		105	90 - 110

Lab Sample ID: 400-119192-23 MS
Matrix: Water
Analysis Batch: 299259

Client Sample ID: EB-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<0.60		10.0	10.4		mg/L		104	73 - 120

Lab Sample ID: 400-119192-23 MSD
Matrix: Water
Analysis Batch: 299259

Client Sample ID: EB-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<0.60		10.0	10.3		mg/L		103	73 - 120	1	8

Lab Sample ID: 400-119192-28 DU
Matrix: Water
Analysis Batch: 299259

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	6.5		5.94	F5	mg/L		9	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-301346/3
Matrix: Water
Analysis Batch: 301346

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			04/12/16 10:55	1

Lab Sample ID: LCS 400-301346/4
Matrix: Water
Analysis Batch: 301346

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	4.19		mg/L		105	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-119192-A-10 MS
Matrix: Water
Analysis Batch: 301346

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	<0.032		1.00	1.01		mg/L		101	75 - 125

Lab Sample ID: 400-119192-A-10 MSD
Matrix: Water
Analysis Batch: 301346

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	<0.032		1.00	0.990		mg/L		99	75 - 125	2	4

Lab Sample ID: 400-119192-21 DU
Matrix: Water
Analysis Batch: 301346

Client Sample ID: MW-14
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

Lab Sample ID: MB 400-301366/3
Matrix: Water
Analysis Batch: 301366

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			04/12/16 12:37	1

Lab Sample ID: LCS 400-301366/4
Matrix: Water
Analysis Batch: 301366

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	4.19		mg/L		105	90 - 110

Lab Sample ID: 400-119192-28 MS
Matrix: Water
Analysis Batch: 301366

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	0.950		mg/L		95	75 - 125

Lab Sample ID: 400-119192-28 MSD
Matrix: Water
Analysis Batch: 301366

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	0.950		mg/L		95	75 - 125	0	4

Lab Sample ID: 400-119722-A-1 DU
Matrix: Water
Analysis Batch: 301366

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.080	J	0.0800	J	mg/L		0	4

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
 SDG: Mississippi

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-299120/6
Matrix: Water
Analysis Batch: 299120

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			03/26/16 13:30	1

Lab Sample ID: LCS 400-299120/7
Matrix: Water
Analysis Batch: 299120

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	14.9		mg/L		99	90 - 110

Lab Sample ID: 400-119192-A-7 MS
Matrix: Water
Analysis Batch: 299120

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	9.97		mg/L		100	77 - 128

Lab Sample ID: 400-119192-A-7 MSD
Matrix: Water
Analysis Batch: 299120

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	9.98		mg/L		100	77 - 128	0	5

Lab Sample ID: 400-119192-A-14 DU
Matrix: Water
Analysis Batch: 299120

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	<1.4		<1.4		mg/L		NC	5

Lab Sample ID: MB 400-299260/6
Matrix: Water
Analysis Batch: 299260

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			03/28/16 11:01	1

Lab Sample ID: LCS 400-299260/7
Matrix: Water
Analysis Batch: 299260

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	15.3		mg/L		102	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: 660-72838-H-1 MS
Matrix: Water
Analysis Batch: 299260

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	10.1		mg/L		101	77 - 128

Lab Sample ID: 660-72838-H-1 MSD
Matrix: Water
Analysis Batch: 299260

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	9.88		mg/L		99	77 - 128	2	5

Lab Sample ID: 400-119192-32 DU
Matrix: Water
Analysis Batch: 299260

Client Sample ID: BAW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	4.5	J	4.60	J	mg/L		2	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-242739/1-A
Matrix: Water
Analysis Batch: 246925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242739

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02219	U	0.0615	0.0615	1.00	0.115	pCi/L	03/29/16 12:59	04/20/16 06:56	1
Carrier	MB %Yield	MB Qualifier	Limits							
Ba Carrier	91.5		40 - 110							
								Prepared	Analyzed	Dil Fac
								03/29/16 12:59	04/20/16 06:56	1

Lab Sample ID: LCS 160-242739/2-A
Matrix: Water
Analysis Batch: 246926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242739

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-226	11.2	11.35		1.18	1.00	0.103	pCi/L	102	68 - 137	
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	89.7		40 - 110							

Lab Sample ID: 490-99915-A-2-A MS
Matrix: Water
Analysis Batch: 246926

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 242739

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.120	U	22.3	28.70		2.94	1.00	0.319	pCi/L	129	75 - 138

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

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

Lab Sample ID: 490-99915-A-2-A MS
Matrix: Water
Analysis Batch: 246926

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 242739

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	81.8		40 - 110

Lab Sample ID: 490-99915-A-2-B MSD
Matrix: Water
Analysis Batch: 246926

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 242739

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	0.120	U	22.2	28.84		3.01	1.00	0.352	pCi/L	130	75 - 138	0.02	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	65.0		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-242746/1-A
Matrix: Water
Analysis Batch: 246400

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242746

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2523	U	0.214	0.215	1.00	0.340	pCi/L	03/29/16 13:28	04/18/16 11:46	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110	03/29/16 13:28	04/18/16 11:46	1
Y Carrier	87.1		40 - 110	03/29/16 13:28	04/18/16 11:46	1

Lab Sample ID: LCS 160-242746/2-A
Matrix: Water
Analysis Batch: 246400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242746

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	15.3	17.02		1.80	1.00	0.383	pCi/L	111	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	89.7		40 - 110
Y Carrier	83.4		40 - 110

Lab Sample ID: 490-99915-A-2-C MS
Matrix: Water
Analysis Batch: 246400

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 242746

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.319	U	30.5	37.77		4.02	1.00	0.909	pCi/L	124	45 - 150

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
 SDG: Mississippi

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

Lab Sample ID: 490-99915-A-2-C MS
 Matrix: Water
 Analysis Batch: 246400

Client Sample ID: Matrix Spike
 Prep Type: Total/NA
 Prep Batch: 242746

	MS	MS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	81.8		40 - 110
Y Carrier	79.3		40 - 110

Lab Sample ID: 490-99915-A-2-D MSD
 Matrix: Water
 Analysis Batch: 246400

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA
 Prep Batch: 242746

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	0.319	U	30.5	39.15		4.27	1.00	1.10	pCi/L	129	45 - 150	0.17	1

	MSD	MSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	65.0		40 - 110
Y Carrier	80.7		40 - 110

Chain of Custody Record

Client Information Client Contact: <u>Shane Barry</u> Mr. Cafe Sellers Southern Company Address: PO BOX 2641 GSC8 Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Daniel Site: Mississippi		Lab P/N: Whitnire, Cheyenne R E-Mail: cheyenne.whitnire@testamericainc.com Carrier Tracking No(s): COC No: 400-53995-23825.2 Page: Page 2 of 4 Job #:	
Analysis Requested Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006621 SOW#:		Preservation Codes: A - HCl B - NaOH C - Zr Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - 400-119192 COC N - Asmeoz O - Na2O4S P - Na2SO3 Q - NaHSO4 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Identification Sample ID: MW-12 MW-13 MW-14 MW-15 MW-16 MW-17 MW-18 MW-11		Matrix (Water, Solid, Other): Sample Type (C=Comp, G=grab): Sample Time: Sample Date: Preservation Code: Matrix: Water Sample Type: G Sample Time: 3-23-16 0745 G Sample Date: 3-23-16 0945 G	
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: <u>[Signature]</u> Relinquished by: <u>[Signature]</u> Relinquished by:		Method of Shipment: Date Time: 3-23-16 2100 Date Time: 3-24-16 0850 Date Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s): °C and Other Remarks: 3.0C 0.0C, 3.1C IR-2	



Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762 (Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR - Plant Daniel Site: Mississippi		Lab Pkt: Whitmire, Chylene R E-Mail: chylene.whitmire@testamericainc.com Carrier Tracking No(s): COC No: 400-53995-23825.3 Page: Page 3 of 4 Job #:						
Analysis Requested Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006621 SSOW#:		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 - AsNeO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 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, A=Asphalt)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Special Instructions/Note:
EB-01				Water				
FB-01				Water				
DUP-01				Water				
EB-02	3-23-16	0700	G	Water	X	X		
FB-02	1	0710	G	Water	X	X		
DUP-02				Water				
EB-03	3-23-16	1557	G	Water	X	X		
FB-03	1	1607	L	Water	X	X		
DUP-03	1	1645	L	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)								
Special Instructions/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)								
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date/Time: 3-23-16 2100 Company: RWH EN Relinquished by: _____ Date/Time: 3-24-16 0850 Company: TA Relinquished by: _____ Date/Time: _____ Company: _____								
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks: 0.0 C 0.0 C, 3.1 C IR-2								



Chain of Custody Record

Client Information Client Contact: <u>Steve Beag</u> Phone: <u>850-838-0192</u> Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762 (Tel) Email: CBSELLER@SOUTHERNCO.COM Project Name: CCR -Plait Daniel Site: Mississippi		Lab P/N: Whitnire, Cheyenne R E-Mail: cheyenne.whitnire@testamericainc.com Carrier Tracking No(s): COC No: 400-53995-23825.4 Page: Page 4 of 4 Job #:	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #:		Analysis Requested Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - ph 4-5 L - EDA Z - other (specify) Other:	
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=soil/wall, BT=Tissue, A=Air) Preservation Code: Field Filtered Sample (Yes or No) Percent MS/MSD (Yes or No) 8316_Ra226_9320_Ra228 SM4600_Cl_E - Chloride, SM4600_SO4_F - Sulfate, 4500_F_C - Fluoride, 2840C - Total Dissolved Solids 6020_7470A		Total Number of containers Special Instructions/Note: 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: Relinquished by: <u>PA. Alexander</u> Date/Time: <u>3/23/16 2100</u> Relinquished by: <u>PA. Alexander</u> Date/Time: <u>3/24/16 0850</u> Relinquished by:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: Date/Time: <u>3/23/16 2100</u> Company: <u>RTH ENV</u> Date/Time: <u>3/24/16 0850</u> Company: <u>RTH ENV</u> Date/Time: Company:	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-119192-2

SDG Number: Mississippi

Login Number: 119192

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	0.5°C,0.6°C,0.9°C,0.0°C,0.3°C IR-6; 0.0°C, 0.0°C, 3.1°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 <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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

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	06-30-16
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	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16
Kansas	NELAP	7	E-10253	05-31-16 *
Kentucky (UST)	State Program	4	53	06-30-16
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-16
Maryland	State Program	3	233	09-30-16
Massachusetts	State Program	1	M-FL094	06-30-16
Michigan	State Program	5	9912	06-30-16
New Jersey	NELAP	2	FL006	06-30-16
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	06-30-16
Texas	NELAP	6	T104704286-15-9	09-30-16
USDA	Federal		P330-13-00193	07-01-16
Virginia	NELAP	3	460166	06-14-16
West Virginia DEP	State Program	3	136	06-30-16

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	06-30-16
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-16
Illinois	NELAP	5	003757	11-30-16
Iowa	State Program	7	373	12-01-16
Kansas	NELAP	7	E-10236	05-31-16
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-16 *
Louisiana (DW)	NELAP	6	LA160008	12-31-16
Maryland	State Program	3	310	09-30-16
Missouri	State Program	7	780	06-30-16
Nevada	State Program	9	MO000542016-1	07-31-16
New Jersey	NELAP	2	MO002	06-30-16
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-16
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-16

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-119192-2
SDG: Mississippi

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
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-16
Texas	NELAP	6	T104704193-15-9	07-31-16
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542015-7	07-31-16
Virginia	NELAP	3	460230	06-14-16
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

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: 400-121852-1

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

For:

Southern Company

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Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

6/16/2016 5:04:50 PM

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

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Job ID: 400-121852-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-121852-1

RAD

Method PrecSep_0: Radium-228 Prep Batch 160-252559: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: BAW-7 (400-121852-1), BAW-1 (400-121852-2), DUP-02 (400-121852-3), FB-02 (400-121852-4), BAW-4 (400-121852-5), EB-02 (400-121852-6), BAW-5 (400-121852-7), BAW-3 (400-121852-8) and BAW-2 (400-121852-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

Method PrecSep-21: Radium-226 Prep Batch 160-252548: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples:BAW-7 (400-121852-1), BAW-1 (400-121852-2), DUP-02 (400-121852-3), FB-02 (400-121852-4), BAW-4 (400-121852-5), EB-02 (400-121852-6), BAW-5 (400-121852-7), BAW-3 (400-121852-8) and BAW-2 (400-121852-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

General Chemistry

Method SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-306931 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 SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-307308 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 SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-307372 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-7

Lab Sample ID: 400-121852-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.68		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00026	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.1	F1	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.92				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-1

Lab Sample ID: 400-121852-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.031		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.84		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00099	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0037	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	24		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.23				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-121852-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.75		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.3		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.92				SU	1		Field Sampling	Total/NA

Client Sample ID: FB-02

Lab Sample ID: 400-121852-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAW-4

Lab Sample ID: 400-121852-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0085		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00070	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-4 (Continued)

Lab Sample ID: 400-121852-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.028		0.0050	0.0032	mg/L	5		6020	Total
									Recoverable
Total Dissolved Solids	52		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.4		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.040	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2.3	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.32				SU	1		Field Sampling	Total/NA

Client Sample ID: EB-02

Lab Sample ID: 400-121852-6

No Detections.

Client Sample ID: BAW-5

Lab Sample ID: 400-121852-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00089	J	0.0013	0.00046	mg/L	5		6020	Total
									Recoverable
Barium	0.055		0.0025	0.00049	mg/L	5		6020	Total
									Recoverable
Boron	0.35		0.050	0.021	mg/L	5		6020	Total
									Recoverable
Calcium	23		0.25	0.13	mg/L	5		6020	Total
									Recoverable
Lithium	0.20		0.0050	0.0032	mg/L	5		6020	Total
									Recoverable
Molybdenum	0.0011	J	0.015	0.00085	mg/L	5		6020	Total
									Recoverable
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	13		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.070	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	17		10	2.8	mg/L	2		SM 4500 SO4 E	Total/NA
Field pH	6.52				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-3

Lab Sample ID: 400-121852-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total
									Recoverable
Calcium	0.56		0.25	0.13	mg/L	5		6020	Total
									Recoverable
Cobalt	0.0059		0.0025	0.00040	mg/L	5		6020	Total
									Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.86				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-2

Lab Sample ID: 400-121852-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.026		0.0025	0.00049	mg/L	5		6020	Total
									Recoverable
Calcium	1.3		0.25	0.13	mg/L	5		6020	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-2 (Continued)

Lab Sample ID: 400-121852-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.00096	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.24				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
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
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
Field Sampling	Field Sampling	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

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

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

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

Laboratory References:

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

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

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-121852-1	BAW-7	Ground Water	05/17/16 11:20	05/19/16 11:43
400-121852-2	BAW-1	Ground Water	05/17/16 12:57	05/19/16 11:43
400-121852-3	DUP-02	Ground Water	05/17/16 10:20	05/19/16 11:43
400-121852-4	FB-02	Ground Water	05/17/16 13:57	05/19/16 11:43
400-121852-5	BAW-4	Ground Water	05/17/16 14:20	05/19/16 11:43
400-121852-6	EB-02	Water	05/17/16 14:35	05/19/16 11:43
400-121852-7	BAW-5	Ground Water	05/17/16 11:25	05/19/16 11:43
400-121852-8	BAW-3	Ground Water	05/18/16 10:00	05/19/16 11:43
400-121852-9	BAW-2	Ground Water	05/18/16 11:20	05/19/16 11:43



Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 05/17/16 11:20
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-1
Matrix: Ground Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/20/16 08:30	05/23/16 16:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/20/16 08:30	05/23/16 16:32	5
Barium	0.012		0.0025	0.00049	mg/L		05/20/16 08:30	05/23/16 16:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/20/16 08:30	05/23/16 16:32	5
Boron	<0.021		0.050	0.021	mg/L		05/20/16 08:30	05/23/16 16:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/20/16 08:30	05/23/16 16:32	5
Calcium	0.68		0.25	0.13	mg/L		05/20/16 08:30	05/23/16 16:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/20/16 08:30	05/23/16 16:32	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		05/20/16 08:30	05/23/16 16:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/20/16 08:30	05/23/16 16:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/20/16 08:30	05/23/16 16:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/20/16 08:30	05/23/16 16:32	5
Selenium	0.00026	J	0.0013	0.00024	mg/L		05/20/16 08:30	05/23/16 16:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/20/16 08:30	05/23/16 16:32	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:56	05/23/16 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			05/23/16 12:42	1
Chloride	5.1	F1	2.0	0.60	mg/L			05/24/16 17:53	1
Fluoride	<0.032		0.10	0.032	mg/L			06/08/16 18:51	1
Sulfate	<1.4		5.0	1.4	mg/L			05/20/16 14:19	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0891		0.0474	0.0481	1.00	0.0612	pCi/L	05/23/16 12:40	06/14/16 07:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/23/16 12:40	06/14/16 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	-0.0456	U	0.204	0.204	1.00	0.376	pCi/L	05/23/16 13:17	06/01/16 13:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/23/16 13:17	06/01/16 13:28	1
Y Carrier	84.9		40 - 110					05/23/16 13:17	06/01/16 13:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0435	U	0.210	0.210	5.00	0.376	pCi/L		06/16/16 12:32	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 05/17/16 11:20
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-1
Matrix: Ground Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.92				SU			05/17/16 11:20	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 05/17/16 12:57
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-2
Matrix: Ground Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/20/16 08:30	05/23/16 16:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/20/16 08:30	05/23/16 16:37	5
Barium	0.031		0.0025	0.00049	mg/L		05/20/16 08:30	05/23/16 16:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/20/16 08:30	05/23/16 16:37	5
Boron	<0.021		0.050	0.021	mg/L		05/20/16 08:30	05/23/16 16:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/20/16 08:30	05/23/16 16:37	5
Calcium	0.84		0.25	0.13	mg/L		05/20/16 08:30	05/23/16 16:37	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/20/16 08:30	05/23/16 16:37	5
Cobalt	0.00099	J	0.0025	0.00040	mg/L		05/20/16 08:30	05/23/16 16:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/20/16 08:30	05/23/16 16:37	5
Lithium	0.0037	J	0.0050	0.0032	mg/L		05/20/16 08:30	05/23/16 16:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/20/16 08:30	05/23/16 16:37	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/20/16 08:30	05/23/16 16:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/20/16 08:30	05/23/16 16:37	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:56	05/23/16 13:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			05/23/16 12:42	1
Chloride	4.9		2.0	0.60	mg/L			05/24/16 17:53	1
Fluoride	<0.032		0.10	0.032	mg/L			06/09/16 16:59	1
Sulfate	<1.4		5.0	1.4	mg/L			05/20/16 14:26	1

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		0.0744	0.0775	1.00	0.0832	pCi/L	05/23/16 12:40	06/14/16 07:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/23/16 12:40	06/14/16 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	0.571		0.272	0.277	1.00	0.400	pCi/L	05/23/16 13:17	06/01/16 13:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/23/16 13:17	06/01/16 13:28	1
Y Carrier	86.0		40 - 110					05/23/16 13:17	06/01/16 13:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.813		0.282	0.288	5.00	0.400	pCi/L		06/16/16 12:32	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 05/17/16 12:57
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-2
Matrix: Ground Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.23				SU			05/17/16 12:57	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: DUP-02
Date Collected: 05/17/16 10:20
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-3
Matrix: Ground Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/20/16 08:30	05/23/16 16:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/20/16 08:30	05/23/16 16:41	5
Barium	0.013		0.0025	0.00049	mg/L		05/20/16 08:30	05/23/16 16:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/20/16 08:30	05/23/16 16:41	5
Boron	<0.021		0.050	0.021	mg/L		05/20/16 08:30	05/23/16 16:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/20/16 08:30	05/23/16 16:41	5
Calcium	0.75		0.25	0.13	mg/L		05/20/16 08:30	05/23/16 16:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/20/16 08:30	05/23/16 16:41	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		05/20/16 08:30	05/23/16 16:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/20/16 08:30	05/23/16 16:41	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/20/16 08:30	05/23/16 16:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/20/16 08:30	05/23/16 16:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/20/16 08:30	05/23/16 16:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/20/16 08:30	05/23/16 16:41	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:56	05/23/16 13:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			05/23/16 12:42	1
Chloride	5.3		2.0	0.60	mg/L			05/24/16 17:53	1
Fluoride	<0.032		0.10	0.032	mg/L			06/09/16 17:05	1
Sulfate	<1.4		5.0	1.4	mg/L			05/20/16 14:26	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.136		0.0536	0.0550	1.00	0.0594	pCi/L	05/23/16 12:40	06/14/16 07:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					05/23/16 12:40	06/14/16 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	0.399		0.255	0.258	1.00	0.393	pCi/L	05/23/16 13:17	06/01/16 13:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					05/23/16 13:17	06/01/16 13:28	1
Y Carrier	85.2		40 - 110					05/23/16 13:17	06/01/16 13:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.535		0.261	0.264	5.00	0.393	pCi/L		06/16/16 12:32	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: DUP-02
Date Collected: 05/17/16 10:20
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-3
Matrix: Ground Water

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.92				SU			05/17/16 10:20	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: FB-02
Date Collected: 05/17/16 13:57
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-4
Matrix: Ground Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		05/23/16 09:00	05/26/16 14:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:11	5
Boron	<0.021		0.050	0.021	mg/L		05/23/16 09:00	05/26/16 14:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:11	5
Calcium	<0.13		0.25	0.13	mg/L		05/23/16 09:00	05/26/16 14:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/23/16 09:00	05/26/16 14:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/23/16 09:00	05/26/16 14:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/23/16 09:00	05/26/16 14:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/23/16 09:00	05/26/16 14:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/23/16 09:00	05/26/16 14:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/23/16 09:00	05/26/16 14:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/23/16 09:00	05/26/16 14:11	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/23/16 09:00	05/26/16 17:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/23/16 09:00	05/26/16 17:14	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:56	05/23/16 13:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			05/20/16 15:13	1
Chloride	<0.60		2.0	0.60	mg/L			05/24/16 17:53	1
Fluoride	<0.032		0.10	0.032	mg/L			06/09/16 17:08	1
Sulfate	<1.4		5.0	1.4	mg/L			05/24/16 11:56	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0234	U	0.0358	0.0359	1.00	0.0614	pCi/L	05/23/16 12:40	06/14/16 07:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					05/23/16 12:40	06/14/16 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	-0.133	U	0.211	0.211	1.00	0.398	pCi/L	05/23/16 13:17	06/01/16 13:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					05/23/16 13:17	06/01/16 13:28	1
Y Carrier	86.0		40 - 110					05/23/16 13:17	06/01/16 13:28	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
 SDG: Bottom Ash

Client Sample ID: FB-02

Lab Sample ID: 400-121852-4

Date Collected: 05/17/16 13:57

Matrix: Ground Water

Date Received: 05/19/16 11:43

Method: Ra226_Ra228 - Combined Radium-226 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	0.214	0.214	5.00	0.398	pCi/L		06/16/16 12:32	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 05/17/16 14:20
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-5
Matrix: Ground Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/23/16 09:00	05/26/16 14:16	5
Barium	0.0085		0.0025	0.00049	mg/L		05/23/16 09:00	05/26/16 14:16	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:16	5
Boron	<0.021		0.050	0.021	mg/L		05/23/16 09:00	05/26/16 14:16	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:16	5
Calcium	3.4		0.25	0.13	mg/L		05/23/16 09:00	05/26/16 14:16	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/23/16 09:00	05/26/16 14:16	5
Cobalt	0.00070	J	0.0025	0.00040	mg/L		05/23/16 09:00	05/26/16 14:16	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/23/16 09:00	05/26/16 14:16	5
Lithium	0.028		0.0050	0.0032	mg/L		05/23/16 09:00	05/26/16 14:16	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/23/16 09:00	05/26/16 14:16	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/23/16 09:00	05/26/16 14:16	5
Thallium	<0.00085		0.00050	0.00085	mg/L		05/23/16 09:00	05/26/16 14:16	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/23/16 09:00	05/26/16 17:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:56	05/23/16 13:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	52		5.0	3.4	mg/L			05/20/16 15:13	1
Chloride	6.4		2.0	0.60	mg/L			05/24/16 17:53	1
Fluoride	0.040	J	0.10	0.032	mg/L			06/09/16 17:10	1
Sulfate	2.3	J	5.0	1.4	mg/L			05/24/16 11:56	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0784		0.0450	0.0456	1.00	0.0587	pCi/L	05/23/16 12:40	06/14/16 07:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	91.5		40 - 110					05/23/16 12:40	06/14/16 07:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0647	U	0.215	0.215	1.00	0.374	pCi/L	05/23/16 13:17	06/01/16 13:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	91.5		40 - 110					05/23/16 13:17	06/01/16 13:29	1
<i>Y Carrier</i>	88.2		40 - 110					05/23/16 13:17	06/01/16 13:29	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
 SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 05/17/16 14:20
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-5
Matrix: Ground Water

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.143	U	0.219	0.219	5.00	0.374	pCi/L		06/16/16 12:32	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.32				SU			05/17/16 14:20	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: EB-02
Date Collected: 05/17/16 14:35
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		05/23/16 09:00	05/26/16 14:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:21	5
Boron	<0.021		0.050	0.021	mg/L		05/23/16 09:00	05/26/16 14:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:21	5
Calcium	<0.13		0.25	0.13	mg/L		05/23/16 09:00	05/26/16 14:21	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/23/16 09:00	05/26/16 14:21	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/23/16 09:00	05/26/16 14:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/23/16 09:00	05/26/16 14:21	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/23/16 09:00	05/26/16 14:21	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/23/16 09:00	05/26/16 14:21	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/23/16 09:00	05/26/16 14:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/23/16 09:00	05/26/16 14:21	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/23/16 09:00	05/26/16 17:23	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/23/16 09:00	05/26/16 17:23	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:56	05/23/16 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			05/20/16 15:13	1
Chloride	<0.60		2.0	0.60	mg/L			05/24/16 17:53	1
Fluoride	<0.032		0.10	0.032	mg/L			06/09/16 17:13	1
Sulfate	<1.4		5.0	1.4	mg/L			05/24/16 11:56	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0466	U	0.0377	0.0379	1.00	0.0554	pCi/L	05/23/16 12:40	06/14/16 07:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.4		40 - 110					05/23/16 12:40	06/14/16 07:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.144	U	0.219	0.220	1.00	0.369	pCi/L	05/23/16 13:17	06/01/16 13:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.4		40 - 110					05/23/16 13:17	06/01/16 13:29	1
Y Carrier	80.7		40 - 110					05/23/16 13:17	06/01/16 13:29	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
 SDG: Bottom Ash

Client Sample ID: EB-02

Lab Sample ID: 400-121852-6

Date Collected: 05/17/16 14:35

Matrix: Water

Date Received: 05/19/16 11:43

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.191	U	0.223	0.223	5.00	0.369	pCi/L		06/16/16 12:32	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 05/17/16 11:25
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-7
Matrix: Ground Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00089	J	0.0013	0.00046	mg/L		05/23/16 09:00	05/26/16 14:25	5
Barium	0.055		0.0025	0.00049	mg/L		05/23/16 09:00	05/26/16 14:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:25	5
Boron	0.35		0.050	0.021	mg/L		05/23/16 09:00	05/26/16 14:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:25	5
Calcium	23		0.25	0.13	mg/L		05/23/16 09:00	05/26/16 14:25	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/23/16 09:00	05/26/16 14:25	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/23/16 09:00	05/26/16 14:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/23/16 09:00	05/26/16 14:25	5
Lithium	0.20		0.0050	0.0032	mg/L		05/23/16 09:00	05/26/16 14:25	5
Molybdenum	0.0011	J	0.015	0.00085	mg/L		05/23/16 09:00	05/26/16 14:25	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/23/16 09:00	05/26/16 14:25	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/23/16 09:00	05/26/16 14:25	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/23/16 09:00	05/26/16 17:28	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:56	05/23/16 13:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			05/20/16 15:13	1
Chloride	13		2.0	0.60	mg/L			05/24/16 17:53	1
Fluoride	0.070	J	0.10	0.032	mg/L			06/09/16 17:15	1
Sulfate	17		10	2.8	mg/L			05/24/16 12:15	2

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		0.0553	0.0567	1.00	0.0617	pCi/L	05/23/16 12:40	06/14/16 07:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	92.3		40 - 110					05/23/16 12:40	06/14/16 07:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.409		0.215	0.218	1.00	0.312	pCi/L	05/23/16 13:17	06/01/16 13:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	92.3		40 - 110					05/23/16 13:17	06/01/16 13:29	1
<i>Y Carrier</i>	87.1		40 - 110					05/23/16 13:17	06/01/16 13:29	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
 SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 05/17/16 11:25
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-7
Matrix: Ground Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.551		0.222	0.225	5.00	0.312	pCi/L		06/16/16 12:32	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.52				SU			05/17/16 11:25	1

- 1
- 2
- 3
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- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 05/18/16 10:00
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-8
Matrix: Ground Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.012		0.0025	0.00049	mg/L		05/23/16 09:00	05/26/16 14:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:30	5
Boron	<0.021		0.050	0.021	mg/L		05/23/16 09:00	05/26/16 14:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:30	5
Calcium	0.56		0.25	0.13	mg/L		05/23/16 09:00	05/26/16 14:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/23/16 09:00	05/26/16 14:30	5
Cobalt	0.0059		0.0025	0.00040	mg/L		05/23/16 09:00	05/26/16 14:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/23/16 09:00	05/26/16 14:30	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/23/16 09:00	05/26/16 14:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/23/16 09:00	05/26/16 14:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/23/16 09:00	05/26/16 14:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/23/16 09:00	05/26/16 14:30	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/23/16 09:00	05/26/16 17:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/23/16 09:00	05/26/16 17:32	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:56	05/23/16 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			05/20/16 15:13	1
Chloride	6.0		2.0	0.60	mg/L			05/24/16 17:53	1
Fluoride	<0.032		0.10	0.032	mg/L			06/09/16 17:18	1
Sulfate	<1.4		5.0	1.4	mg/L			05/24/16 11:56	1

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		0.0484	0.0494	1.00	0.0530	pCi/L	05/23/16 12:40	06/14/16 07:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					05/23/16 12:40	06/14/16 07:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0151	U	0.200	0.200	1.00	0.358	pCi/L	05/23/16 13:17	06/01/16 13:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					05/23/16 13:17	06/01/16 13:29	1
Y Carrier	87.1		40 - 110					05/23/16 13:17	06/01/16 13:29	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
 SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 05/18/16 10:00
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-8
Matrix: Ground Water

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.126	U	0.205	0.206	5.00	0.358	pCi/L		06/16/16 12:32	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.86				SU			05/18/16 10:00	1

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- 2
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- 13
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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 05/18/16 11:20
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-9
Matrix: Ground Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.026		0.0025	0.00049	mg/L		05/23/16 09:00	05/26/16 14:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:34	5
Boron	<0.021		0.050	0.021	mg/L		05/23/16 09:00	05/26/16 14:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 14:34	5
Calcium	1.3		0.25	0.13	mg/L		05/23/16 09:00	05/26/16 14:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/23/16 09:00	05/26/16 14:34	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/23/16 09:00	05/26/16 14:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/23/16 09:00	05/26/16 14:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/23/16 09:00	05/26/16 14:34	5
Molybdenum	0.00096	J	0.015	0.00085	mg/L		05/23/16 09:00	05/26/16 14:34	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/23/16 09:00	05/26/16 14:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/23/16 09:00	05/26/16 14:34	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/23/16 09:00	05/26/16 17:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/23/16 09:00	05/26/16 17:37	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:56	05/23/16 13:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			05/20/16 15:13	1
Chloride	4.2		2.0	0.60	mg/L			05/24/16 17:56	1
Fluoride	<0.032		0.10	0.032	mg/L			06/09/16 17:21	1
Sulfate	<1.4		5.0	1.4	mg/L			05/24/16 11:56	1

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		0.0530	0.0544	1.00	0.0585	pCi/L	05/23/16 12:40	06/14/16 07:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.0		40 - 110					05/23/16 12:40	06/14/16 07:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.336		0.219	0.221	1.00	0.335	pCi/L	05/23/16 13:17	06/01/16 13:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.0		40 - 110					05/23/16 13:17	06/01/16 13:29	1
Y Carrier	90.1		40 - 110					05/23/16 13:17	06/01/16 13:29	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
 SDG: Bottom Ash

Client Sample ID: BAW-2

Lab Sample ID: 400-121852-9

Date Collected: 05/18/16 11:20

Matrix: Ground Water

Date Received: 05/19/16 11:43

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.471		0.225	0.227	5.00	0.335	pCi/L		06/16/16 12:32	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.24				SU			05/18/16 11:20	1

- 1
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Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Qualifiers

Metals

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.

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.

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 05/17/16 11:20
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			306733	05/20/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	307215	05/23/16 16:32	GKP	TAL PEN
Total/NA	Prep	7470A			306799	05/20/16 08:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	307114	05/23/16 13:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	307100	05/23/16 12:42	CAC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	307372	05/24/16 17:53	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	309256	06/08/16 18:51	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	306931	05/20/16 14:19	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			252548	05/23/16 12:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	256311	06/14/16 07:21	ALS	TAL SL
Total/NA	Prep	PrecSep_0			252559	05/23/16 13:17	MCJ	TAL SL
Total/NA	Analysis	9320		1	254106	06/01/16 13:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	256789	06/16/16 12:32	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	309179	05/17/16 11:20	BWS	TAL PEN

Client Sample ID: BAW-1
Date Collected: 05/17/16 12:57
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			306733	05/20/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	307215	05/23/16 16:37	GKP	TAL PEN
Total/NA	Prep	7470A			306799	05/20/16 08:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	307114	05/23/16 13:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	307100	05/23/16 12:42	CAC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	307372	05/24/16 17:53	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	309418	06/09/16 16:59	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	306931	05/20/16 14:26	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			252548	05/23/16 12:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	256311	06/14/16 07:21	ALS	TAL SL
Total/NA	Prep	PrecSep_0			252559	05/23/16 13:17	MCJ	TAL SL
Total/NA	Analysis	9320		1	254106	06/01/16 13:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	256789	06/16/16 12:32	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	309179	05/17/16 12:57	BWS	TAL PEN

Client Sample ID: DUP-02
Date Collected: 05/17/16 10:20
Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			306733	05/20/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	307215	05/23/16 16:41	GKP	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: DUP-02

Date Collected: 05/17/16 10:20

Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			306799	05/20/16 08:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	307114	05/23/16 13:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	307100	05/23/16 12:42	CAC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	307372	05/24/16 17:53	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	309418	06/09/16 17:05	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	306931	05/20/16 14:26	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			252548	05/23/16 12:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	256311	06/14/16 07:21	ALS	TAL SL
Total/NA	Prep	PrecSep_0			252559	05/23/16 13:17	MCJ	TAL SL
Total/NA	Analysis	9320		1	254106	06/01/16 13:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	256789	06/16/16 12:32	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	309179	05/17/16 10:20	BWS	TAL PEN

Client Sample ID: FB-02

Date Collected: 05/17/16 13:57

Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	307766	05/26/16 14:11	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	307766	05/26/16 17:14	RJB	TAL PEN
Total/NA	Prep	7470A			306799	05/20/16 08:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	307114	05/23/16 13:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	306851	05/20/16 15:13	CAC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	307372	05/24/16 17:53	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	309418	06/09/16 17:08	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	307308	05/24/16 11:56	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			252548	05/23/16 12:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	256311	06/14/16 07:21	ALS	TAL SL
Total/NA	Prep	PrecSep_0			252559	05/23/16 13:17	MCJ	TAL SL
Total/NA	Analysis	9320		1	254106	06/01/16 13:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	256789	06/16/16 12:32	RTM	TAL SL

Client Sample ID: BAW-4

Date Collected: 05/17/16 14:20

Date Received: 05/19/16 11:43

Lab Sample ID: 400-121852-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	307766	05/26/16 14:16	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		307041	05/23/16 09:00	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-4

Lab Sample ID: 400-121852-5

Date Collected: 05/17/16 14:20

Matrix: Ground Water

Date Received: 05/19/16 11:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020	RA	5	307766	05/26/16 17:19	RJB	TAL PEN
Total/NA	Prep	7470A			306799	05/20/16 08:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	307114	05/23/16 13:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	306851	05/20/16 15:13	CAC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	307372	05/24/16 17:53	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	309418	06/09/16 17:10	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	307308	05/24/16 11:56	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			252548	05/23/16 12:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	256311	06/14/16 07:22	ALS	TAL SL
Total/NA	Prep	PrecSep_0			252559	05/23/16 13:17	MCJ	TAL SL
Total/NA	Analysis	9320		1	254106	06/01/16 13:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	256789	06/16/16 12:32	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	309179	05/17/16 14:20	BWS	TAL PEN

Client Sample ID: EB-02

Lab Sample ID: 400-121852-6

Date Collected: 05/17/16 14:35

Matrix: Water

Date Received: 05/19/16 11:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	307766	05/26/16 14:21	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	307766	05/26/16 17:23	RJB	TAL PEN
Total/NA	Prep	7470A			306799	05/20/16 08:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	307114	05/23/16 13:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	306851	05/20/16 15:13	CAC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	307372	05/24/16 17:53	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	309418	06/09/16 17:13	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	307308	05/24/16 11:56	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			252548	05/23/16 12:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	256311	06/14/16 07:22	ALS	TAL SL
Total/NA	Prep	PrecSep_0			252559	05/23/16 13:17	MCJ	TAL SL
Total/NA	Analysis	9320		1	254106	06/01/16 13:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	256789	06/16/16 12:32	RTM	TAL SL

Client Sample ID: BAW-5

Lab Sample ID: 400-121852-7

Date Collected: 05/17/16 11:25

Matrix: Ground Water

Date Received: 05/19/16 11:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	307766	05/26/16 14:25	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-5

Lab Sample ID: 400-121852-7

Date Collected: 05/17/16 11:25

Matrix: Ground Water

Date Received: 05/19/16 11:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	RA		307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	307766	05/26/16 17:28	RJB	TAL PEN
Total/NA	Prep	7470A			306799	05/20/16 08:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	307114	05/23/16 13:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	306851	05/20/16 15:13	CAC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	307372	05/24/16 17:53	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	309418	06/09/16 17:15	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		2	307308	05/24/16 12:15	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			252548	05/23/16 12:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	256311	06/14/16 07:22	ALS	TAL SL
Total/NA	Prep	PrecSep_0			252559	05/23/16 13:17	MCJ	TAL SL
Total/NA	Analysis	9320		1	254106	06/01/16 13:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	256789	06/16/16 12:32	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	309179	05/17/16 11:25	BWS	TAL PEN

Client Sample ID: BAW-3

Lab Sample ID: 400-121852-8

Date Collected: 05/18/16 10:00

Matrix: Ground Water

Date Received: 05/19/16 11:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	307766	05/26/16 14:30	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	307766	05/26/16 17:32	RJB	TAL PEN
Total/NA	Prep	7470A			306799	05/20/16 08:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	307114	05/23/16 13:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	306851	05/20/16 15:13	CAC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	307372	05/24/16 17:53	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	309418	06/09/16 17:18	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	307308	05/24/16 11:56	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			252548	05/23/16 12:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	256311	06/14/16 07:22	ALS	TAL SL
Total/NA	Prep	PrecSep_0			252559	05/23/16 13:17	MCJ	TAL SL
Total/NA	Analysis	9320		1	254106	06/01/16 13:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	256789	06/16/16 12:32	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	309179	05/18/16 10:00	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Client Sample ID: BAW-2

Lab Sample ID: 400-121852-9

Date Collected: 05/18/16 11:20

Matrix: Ground Water

Date Received: 05/19/16 11:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	307766	05/26/16 14:34	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		307041	05/23/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	307766	05/26/16 17:37	RJB	TAL PEN
Total/NA	Prep	7470A			306799	05/20/16 08:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	307114	05/23/16 13:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	306851	05/20/16 15:13	CAC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	307372	05/24/16 17:56	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	309418	06/09/16 17:21	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	307308	05/24/16 11:56	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			252548	05/23/16 12:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	256311	06/14/16 07:22	ALS	TAL SL
Total/NA	Prep	PrecSep_0			252559	05/23/16 13:17	MCJ	TAL SL
Total/NA	Analysis	9320		1	254106	06/01/16 13:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	256789	06/16/16 12:32	RTM	TAL SL
Total/NA	Analysis	Field Sampling		1	309179	05/18/16 11:20	BWS	TAL PEN

Laboratory References:

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

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

QC Association Summary

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
 SDG: Bottom Ash

Metals

Prep Batch: 306733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121850-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-121850-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
400-121852-1	BAW-7	Total Recoverable	Ground Water	3005A	
400-121852-2	BAW-1	Total Recoverable	Ground Water	3005A	
400-121852-3	DUP-02	Total Recoverable	Ground Water	3005A	
LCS 400-306733/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
MB 400-306733/1-A ^5	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 306799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121850-B-2-C MS	Matrix Spike	Total/NA	Water	7470A	
400-121850-B-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
400-121852-1	BAW-7	Total/NA	Ground Water	7470A	
400-121852-2	BAW-1	Total/NA	Ground Water	7470A	
400-121852-3	DUP-02	Total/NA	Ground Water	7470A	
400-121852-4	FB-02	Total/NA	Ground Water	7470A	
400-121852-5	BAW-4	Total/NA	Ground Water	7470A	
400-121852-6	EB-02	Total/NA	Water	7470A	
400-121852-7	BAW-5	Total/NA	Ground Water	7470A	
400-121852-8	BAW-3	Total/NA	Ground Water	7470A	
400-121852-9	BAW-2	Total/NA	Ground Water	7470A	
LCS 400-306799/15-A	Lab Control Sample	Total/NA	Water	7470A	
MB 400-306799/14-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 307041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-4 - RA	FB-02	Total Recoverable	Ground Water	3005A	
400-121852-4	FB-02	Total Recoverable	Ground Water	3005A	
400-121852-5	BAW-4	Total Recoverable	Ground Water	3005A	
400-121852-5 - RA	BAW-4	Total Recoverable	Ground Water	3005A	
400-121852-6	EB-02	Total Recoverable	Water	3005A	
400-121852-6 - RA	EB-02	Total Recoverable	Water	3005A	
400-121852-7	BAW-5	Total Recoverable	Ground Water	3005A	
400-121852-7 - RA	BAW-5	Total Recoverable	Ground Water	3005A	
400-121852-8 - RA	BAW-3	Total Recoverable	Ground Water	3005A	
400-121852-8	BAW-3	Total Recoverable	Ground Water	3005A	
400-121852-9	BAW-2	Total Recoverable	Ground Water	3005A	
400-121852-9 - RA	BAW-2	Total Recoverable	Ground Water	3005A	
400-121951-B-2-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-121951-B-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
LCS 400-307041/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
MB 400-307041/1-A ^5	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 307114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121850-B-2-C MS	Matrix Spike	Total/NA	Water	7470A	306799
400-121850-B-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	306799
400-121852-1	BAW-7	Total/NA	Ground Water	7470A	306799
400-121852-2	BAW-1	Total/NA	Ground Water	7470A	306799
400-121852-3	DUP-02	Total/NA	Ground Water	7470A	306799
400-121852-4	FB-02	Total/NA	Ground Water	7470A	306799

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Metals (Continued)

Analysis Batch: 307114 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-5	BAW-4	Total/NA	Ground Water	7470A	306799
400-121852-6	EB-02	Total/NA	Water	7470A	306799
400-121852-7	BAW-5	Total/NA	Ground Water	7470A	306799
400-121852-8	BAW-3	Total/NA	Ground Water	7470A	306799
400-121852-9	BAW-2	Total/NA	Ground Water	7470A	306799
LCS 400-306799/15-A	Lab Control Sample	Total/NA	Water	7470A	306799
MB 400-306799/14-A	Method Blank	Total/NA	Water	7470A	306799

Analysis Batch: 307215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121850-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	306733
400-121850-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	306733
400-121852-1	BAW-7	Total Recoverable	Ground Water	6020	306733
400-121852-2	BAW-1	Total Recoverable	Ground Water	6020	306733
400-121852-3	DUP-02	Total Recoverable	Ground Water	6020	306733
LCS 400-306733/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	306733
MB 400-306733/1-A ^5	Method Blank	Total Recoverable	Water	6020	306733

Analysis Batch: 307766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-4	FB-02	Total Recoverable	Ground Water	6020	307041
400-121852-4 - RA	FB-02	Total Recoverable	Ground Water	6020	307041
400-121852-5	BAW-4	Total Recoverable	Ground Water	6020	307041
400-121852-5 - RA	BAW-4	Total Recoverable	Ground Water	6020	307041
400-121852-6	EB-02	Total Recoverable	Water	6020	307041
400-121852-6 - RA	EB-02	Total Recoverable	Water	6020	307041
400-121852-7	BAW-5	Total Recoverable	Ground Water	6020	307041
400-121852-7 - RA	BAW-5	Total Recoverable	Ground Water	6020	307041
400-121852-8	BAW-3	Total Recoverable	Ground Water	6020	307041
400-121852-8 - RA	BAW-3	Total Recoverable	Ground Water	6020	307041
400-121852-9	BAW-2	Total Recoverable	Ground Water	6020	307041
400-121852-9 - RA	BAW-2	Total Recoverable	Ground Water	6020	307041
400-121951-B-2-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	307041
400-121951-B-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	307041
LCS 400-307041/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	307041
MB 400-307041/1-A ^5	Method Blank	Total Recoverable	Water	6020	307041

General Chemistry

Analysis Batch: 306851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121842-B-1 DU	Duplicate	Total/NA	Water	SM 2540C	
400-121852-4	FB-02	Total/NA	Ground Water	SM 2540C	
400-121852-5	BAW-4	Total/NA	Ground Water	SM 2540C	
400-121852-6	EB-02	Total/NA	Water	SM 2540C	
400-121852-7	BAW-5	Total/NA	Ground Water	SM 2540C	
400-121852-8	BAW-3	Total/NA	Ground Water	SM 2540C	
400-121852-9	BAW-2	Total/NA	Ground Water	SM 2540C	
400-121874-K-3 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 400-306851/2	Lab Control Sample	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
 SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 306851 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-306851/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 306931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121711-B-7 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-121711-B-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-121852-1	BAW-7	Total/NA	Ground Water	SM 4500 SO4 E	
400-121852-2	BAW-1	Total/NA	Ground Water	SM 4500 SO4 E	
400-121852-3	DUP-02	Total/NA	Ground Water	SM 4500 SO4 E	
400-121852-3 DU	DUP-02	Total/NA	Ground Water	SM 4500 SO4 E	
LCS 400-306931/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MB 400-306931/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 307100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121825-B-26 DU	Duplicate	Total/NA	Water	SM 2540C	
400-121852-1	BAW-7	Total/NA	Ground Water	SM 2540C	
400-121852-2	BAW-1	Total/NA	Ground Water	SM 2540C	
400-121852-3	DUP-02	Total/NA	Ground Water	SM 2540C	
LCS 400-307100/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 400-307100/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 307308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-4	FB-02	Total/NA	Ground Water	SM 4500 SO4 E	
400-121852-5	BAW-4	Total/NA	Ground Water	SM 4500 SO4 E	
400-121852-6	EB-02	Total/NA	Water	SM 4500 SO4 E	
400-121852-7	BAW-5	Total/NA	Ground Water	SM 4500 SO4 E	
400-121852-8	BAW-3	Total/NA	Ground Water	SM 4500 SO4 E	
400-121852-8 DU	BAW-3	Total/NA	Ground Water	SM 4500 SO4 E	
400-121852-9	BAW-2	Total/NA	Ground Water	SM 4500 SO4 E	
400-121941-B-2 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-121941-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
LCS 400-307308/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MB 400-307308/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 307372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-1	BAW-7	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-1 MS	BAW-7	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-1 MSD	BAW-7	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-2	BAW-1	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-3	DUP-02	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-4	FB-02	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-5	BAW-4	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-6	EB-02	Total/NA	Water	SM 4500 Cl- E	
400-121852-7	BAW-5	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-8	BAW-3	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-8 DU	BAW-3	Total/NA	Ground Water	SM 4500 Cl- E	
400-121852-9	BAW-2	Total/NA	Ground Water	SM 4500 Cl- E	
LCS 400-307372/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 307372 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-307372/6	Method Blank	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 309256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121848-E-2 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-121848-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-121850-A-5 DU	Duplicate	Total/NA	Water	SM 4500 F C	
400-121852-1	BAW-7	Total/NA	Ground Water	SM 4500 F C	
LCS 400-309256/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MB 400-309256/3	Method Blank	Total/NA	Water	SM 4500 F C	

Analysis Batch: 309418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-2	BAW-1	Total/NA	Ground Water	SM 4500 F C	
400-121852-2 MS	BAW-1	Total/NA	Ground Water	SM 4500 F C	
400-121852-2 MSD	BAW-1	Total/NA	Ground Water	SM 4500 F C	
400-121852-3	DUP-02	Total/NA	Ground Water	SM 4500 F C	
400-121852-4	FB-02	Total/NA	Ground Water	SM 4500 F C	
400-121852-5	BAW-4	Total/NA	Ground Water	SM 4500 F C	
400-121852-6	EB-02	Total/NA	Water	SM 4500 F C	
400-121852-7	BAW-5	Total/NA	Ground Water	SM 4500 F C	
400-121852-8	BAW-3	Total/NA	Ground Water	SM 4500 F C	
400-121852-9	BAW-2	Total/NA	Ground Water	SM 4500 F C	
400-122209-A-1 DU	Duplicate	Total/NA	Water	SM 4500 F C	
LCS 400-309418/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MB 400-309418/3	Method Blank	Total/NA	Water	SM 4500 F C	

Rad

Prep Batch: 252548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-1	BAW-7	Total/NA	Ground Water	PrecSep-21	
400-121852-2	BAW-1	Total/NA	Ground Water	PrecSep-21	
400-121852-3	DUP-02	Total/NA	Ground Water	PrecSep-21	
400-121852-4	FB-02	Total/NA	Ground Water	PrecSep-21	
400-121852-5	BAW-4	Total/NA	Ground Water	PrecSep-21	
400-121852-6	EB-02	Total/NA	Water	PrecSep-21	
400-121852-7	BAW-5	Total/NA	Ground Water	PrecSep-21	
400-121852-8	BAW-3	Total/NA	Ground Water	PrecSep-21	
400-121852-9	BAW-2	Total/NA	Ground Water	PrecSep-21	
LCS 160-252548/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-252548/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-252548/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 252559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-1	BAW-7	Total/NA	Ground Water	PrecSep_0	
400-121852-2	BAW-1	Total/NA	Ground Water	PrecSep_0	
400-121852-3	DUP-02	Total/NA	Ground Water	PrecSep_0	
400-121852-4	FB-02	Total/NA	Ground Water	PrecSep_0	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Rad (Continued)

Prep Batch: 252559 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-5	BAW-4	Total/NA	Ground Water	PrecSep_0	
400-121852-6	EB-02	Total/NA	Water	PrecSep_0	
400-121852-7	BAW-5	Total/NA	Ground Water	PrecSep_0	
400-121852-8	BAW-3	Total/NA	Ground Water	PrecSep_0	
400-121852-9	BAW-2	Total/NA	Ground Water	PrecSep_0	
LCS 160-252559/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-252559/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-252559/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 309179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121852-1	BAW-7	Total/NA	Ground Water	Field Sampling	
400-121852-2	BAW-1	Total/NA	Ground Water	Field Sampling	
400-121852-3	DUP-02	Total/NA	Ground Water	Field Sampling	
400-121852-5	BAW-4	Total/NA	Ground Water	Field Sampling	
400-121852-7	BAW-5	Total/NA	Ground Water	Field Sampling	
400-121852-8	BAW-3	Total/NA	Ground Water	Field Sampling	
400-121852-9	BAW-2	Total/NA	Ground Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-306733/1-A ^5
Matrix: Water
Analysis Batch: 307215

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 306733

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/20/16 08:30	05/23/16 14:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/20/16 08:30	05/23/16 14:18	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/20/16 08:30	05/23/16 14:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/20/16 08:30	05/23/16 14:18	5
Boron	<0.021		0.050	0.021	mg/L		05/20/16 08:30	05/23/16 14:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/20/16 08:30	05/23/16 14:18	5
Calcium	<0.13		0.25	0.13	mg/L		05/20/16 08:30	05/23/16 14:18	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/20/16 08:30	05/23/16 14:18	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/20/16 08:30	05/23/16 14:18	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/20/16 08:30	05/23/16 14:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/20/16 08:30	05/23/16 14:18	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/20/16 08:30	05/23/16 14:18	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/20/16 08:30	05/23/16 14:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/20/16 08:30	05/23/16 14:18	5

Lab Sample ID: LCS 400-306733/2-A ^1
Matrix: Water
Analysis Batch: 307215

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 306733

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0532		mg/L		106	80 - 120
Arsenic	0.0500	0.0528		mg/L		106	80 - 120
Barium	0.0500	0.0457		mg/L		91	80 - 120
Beryllium	0.0500	0.0475		mg/L		95	80 - 120
Boron	0.100	0.0975		mg/L		98	80 - 120
Cadmium	0.0500	0.0505		mg/L		101	80 - 120
Calcium	5.00	5.03		mg/L		101	80 - 120
Chromium	0.0500	0.0496		mg/L		99	80 - 120
Cobalt	0.0500	0.0495		mg/L		99	80 - 120
Lead	0.0500	0.0494		mg/L		99	80 - 120
Lithium	0.0500	0.0496		mg/L		99	80 - 120
Molybdenum	0.0500	0.0492		mg/L		98	80 - 120
Selenium	0.0500	0.0502		mg/L		100	80 - 120
Thallium	0.0100	0.00996		mg/L		100	80 - 120

Lab Sample ID: 400-121850-B-1-B MS ^5
Matrix: Water
Analysis Batch: 307215

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 306733

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0533		mg/L		107	75 - 125
Arsenic	0.00078	J	0.0500	0.0538		mg/L		106	75 - 125
Barium	0.031		0.0500	0.0750		mg/L		89	75 - 125
Beryllium	<0.00034		0.0500	0.0478		mg/L		96	75 - 125
Boron	<0.021		0.100	0.117		mg/L		117	75 - 125
Cadmium	<0.00034		0.0500	0.0483		mg/L		97	75 - 125
Calcium	1.0		5.00	6.25		mg/L		105	75 - 125
Chromium	<0.0011		0.0500	0.0508		mg/L		102	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-121850-B-1-B MS ^5

Matrix: Water

Analysis Batch: 307215

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 306733

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.	
	Result	Qualifier		Result	Qualifier				Limits	Limits
Cobalt	0.00081	J	0.0500	0.0513		mg/L		101	75 - 125	
Lead	<0.00035		0.0500	0.0474		mg/L		95	75 - 125	
Lithium	<0.0032		0.0500	0.0491		mg/L		98	75 - 125	
Molybdenum	<0.00085		0.0500	0.0508		mg/L		102	75 - 125	
Selenium	<0.00024		0.0500	0.0510		mg/L		102	75 - 125	
Thallium	<0.000085		0.0100	0.00977		mg/L		98	75 - 125	

Lab Sample ID: 400-121850-B-1-C MSD ^5

Matrix: Water

Analysis Batch: 307215

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 306733

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Antimony	<0.0010		0.0500	0.0525		mg/L		105	75 - 125	2	20	
Arsenic	0.00078	J	0.0500	0.0532		mg/L		105	75 - 125	1	20	
Barium	0.031		0.0500	0.0732		mg/L		85	75 - 125	2	20	
Beryllium	<0.00034		0.0500	0.0476		mg/L		95	75 - 125	0	20	
Boron	<0.021		0.100	0.111		mg/L		111	75 - 125	5	20	
Cadmium	<0.00034		0.0500	0.0508		mg/L		102	75 - 125	5	20	
Calcium	1.0		5.00	6.09		mg/L		102	75 - 125	3	20	
Chromium	<0.0011		0.0500	0.0501		mg/L		100	75 - 125	2	20	
Cobalt	0.00081	J	0.0500	0.0517		mg/L		102	75 - 125	1	20	
Lead	<0.00035		0.0500	0.0471		mg/L		94	75 - 125	1	20	
Lithium	<0.0032		0.0500	0.0489		mg/L		98	75 - 125	0	20	
Molybdenum	<0.00085		0.0500	0.0513		mg/L		103	75 - 125	1	20	
Selenium	<0.00024		0.0500	0.0524		mg/L		105	75 - 125	3	20	
Thallium	<0.000085		0.0100	0.00976		mg/L		98	75 - 125	0	20	

Lab Sample ID: MB 400-307041/1-A ^5

Matrix: Water

Analysis Batch: 307766

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 307041

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0010		0.0025	0.0010	mg/L		05/23/16 09:00	05/26/16 17:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/23/16 09:00	05/26/16 17:10	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/23/16 09:00	05/26/16 17:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 17:10	5
Boron	<0.021		0.050	0.021	mg/L		05/23/16 09:00	05/26/16 17:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/23/16 09:00	05/26/16 17:10	5
Calcium	<0.13		0.25	0.13	mg/L		05/23/16 09:00	05/26/16 17:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/23/16 09:00	05/26/16 17:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/23/16 09:00	05/26/16 17:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/23/16 09:00	05/26/16 17:10	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/23/16 09:00	05/26/16 17:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/23/16 09:00	05/26/16 17:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/23/16 09:00	05/26/16 17:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/23/16 09:00	05/26/16 17:10	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-307041/2-A ^1

Matrix: Water

Analysis Batch: 307766

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 307041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0484		mg/L		97	80 - 120
Arsenic	0.0500	0.0503		mg/L		101	80 - 120
Barium	0.0500	0.0447		mg/L		89	80 - 120
Beryllium	0.0500	0.0482		mg/L		96	80 - 120
Boron	0.100	0.0910		mg/L		91	80 - 120
Cadmium	0.0500	0.0490		mg/L		98	80 - 120
Calcium	5.00	5.07		mg/L		101	80 - 120
Chromium	0.0500	0.0497		mg/L		99	80 - 120
Cobalt	0.0500	0.0494		mg/L		99	80 - 120
Lead	0.0500	0.0490		mg/L		98	80 - 120
Lithium	0.0500	0.0512		mg/L		102	80 - 120
Molybdenum	0.0500	0.0493		mg/L		99	80 - 120
Selenium	0.0500	0.0503		mg/L		101	80 - 120
Thallium	0.0100	0.00953		mg/L		95	80 - 120

Lab Sample ID: 400-121951-B-2-B MS ^5

Matrix: Water

Analysis Batch: 307766

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 307041

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0545		mg/L		109	75 - 125
Arsenic	<0.00046		0.0500	0.0547		mg/L		109	75 - 125
Barium	0.070		0.0500	0.121		mg/L		101	75 - 125
Beryllium	0.00034	J	0.0500	0.0488		mg/L		97	75 - 125
Boron	<0.021		0.100	0.122		mg/L		122	75 - 125
Cadmium	<0.00034		0.0500	0.0522		mg/L		104	75 - 125
Calcium	3.7		5.00	9.05		mg/L		106	75 - 125
Chromium	<0.0011		0.0500	0.0529		mg/L		106	75 - 125
Cobalt	0.013		0.0500	0.0634		mg/L		102	75 - 125
Lead	<0.00035		0.0500	0.0490		mg/L		98	75 - 125
Lithium	<0.0032		0.0500	0.0520		mg/L		104	75 - 125
Molybdenum	<0.00085		0.0500	0.0512		mg/L		102	75 - 125
Selenium	<0.00024		0.0500	0.0525		mg/L		105	75 - 125
Thallium	<0.00085		0.0100	0.00955		mg/L		95	75 - 125

Lab Sample ID: 400-121951-B-2-C MSD ^5

Matrix: Water

Analysis Batch: 307766

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 307041

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0534		mg/L		107	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0528		mg/L		106	75 - 125	4	20
Barium	0.070		0.0500	0.119		mg/L		97	75 - 125	2	20
Beryllium	0.00034	J	0.0500	0.0493		mg/L		98	75 - 125	1	20
Boron	<0.021		0.100	0.120		mg/L		120	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125	4	20
Calcium	3.7		5.00	8.83		mg/L		102	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0509		mg/L		102	75 - 125	4	20

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-121951-B-2-C MSD ^5
Matrix: Water
Analysis Batch: 307766

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 307041

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Cobalt	0.013		0.0500	0.0625		mg/L		100	75 - 125	1	20
Lead	<0.00035		0.0500	0.0493		mg/L		99	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0524		mg/L		105	75 - 125	1	20
Molybdenum	<0.00085		0.0500	0.0503		mg/L		101	75 - 125	2	20
Selenium	<0.00024		0.0500	0.0508		mg/L		102	75 - 125	3	20
Thallium	<0.000085		0.0100	0.00961		mg/L		96	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-306799/14-A
Matrix: Water
Analysis Batch: 307114

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306799

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		05/20/16 08:54	05/23/16 12:51	1

Lab Sample ID: LCS 400-306799/15-A
Matrix: Water
Analysis Batch: 307114

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306799

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.000957		mg/L		95	80 - 120

Lab Sample ID: 400-121850-B-2-C MS
Matrix: Water
Analysis Batch: 307114

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 306799

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00194		mg/L		96	80 - 120

Lab Sample ID: 400-121850-B-2-D MSD
Matrix: Water
Analysis Batch: 307114

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 306799

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Mercury	<0.000070		0.00201	0.00189		mg/L		94	80 - 120	3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-306851/1
Matrix: Water
Analysis Batch: 306851

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			05/20/16 15:13	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 400-306851/2
Matrix: Water
Analysis Batch: 306851

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	266		mg/L		91	78 - 122

Lab Sample ID: 400-121842-B-1 DU
Matrix: Water
Analysis Batch: 306851

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	41000		39300		mg/L		3	5

Lab Sample ID: 400-121874-K-3 DU
Matrix: Water
Analysis Batch: 306851

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	5600		5460		mg/L		2	5

Lab Sample ID: MB 400-307100/1
Matrix: Water
Analysis Batch: 307100

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			05/23/16 12:42	1

Lab Sample ID: LCS 400-307100/2
Matrix: Water
Analysis Batch: 307100

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	264		mg/L		90	78 - 122

Lab Sample ID: 400-121825-B-26 DU
Matrix: Water
Analysis Batch: 307100

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	3800		3680		mg/L		3	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-307372/6
Matrix: Water
Analysis Batch: 307372

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			05/24/16 17:23	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: LCS 400-307372/7

Matrix: Water

Analysis Batch: 307372

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: 400-121852-1 MS

Matrix: Ground Water

Analysis Batch: 307372

Client Sample ID: BAW-7

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.1	F1	10.0	17.7	F1	mg/L		126	73 - 120

Lab Sample ID: 400-121852-1 MSD

Matrix: Ground Water

Analysis Batch: 307372

Client Sample ID: BAW-7

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.1	F1	10.0	17.5	F1	mg/L		124	73 - 120	1	8

Lab Sample ID: 400-121852-8 DU

Matrix: Ground Water

Analysis Batch: 307372

Client Sample ID: BAW-3

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.0			5.96		mg/L				0.1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-309256/3

Matrix: Water

Analysis Batch: 309256

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			06/08/16 17:50	1

Lab Sample ID: LCS 400-309256/4

Matrix: Water

Analysis Batch: 309256

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	4.19		mg/L		105	90 - 110

Lab Sample ID: 400-121848-E-2 MS

Matrix: Water

Analysis Batch: 309256

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	1.43		mg/L		107	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-121848-E-2 MSD
Matrix: Water
Analysis Batch: 309256

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	1.43		mg/L		107	75 - 125	0	4

Lab Sample ID: 400-121850-A-5 DU
Matrix: Water
Analysis Batch: 309256

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

Lab Sample ID: MB 400-309418/3
Matrix: Water
Analysis Batch: 309418

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			06/09/16 16:51	1

Lab Sample ID: LCS 400-309418/4
Matrix: Water
Analysis Batch: 309418

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	4.28		mg/L		107	90 - 110

Lab Sample ID: 400-121852-2 MS
Matrix: Ground Water
Analysis Batch: 309418

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	1.05		mg/L		105	75 - 125

Lab Sample ID: 400-121852-2 MSD
Matrix: Ground Water
Analysis Batch: 309418

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	1.03		mg/L		103	75 - 125	2	4

Lab Sample ID: 400-122209-A-1 DU
Matrix: Water
Analysis Batch: 309418

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-306931/6
Matrix: Water
Analysis Batch: 306931

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			05/20/16 14:02	1

Lab Sample ID: LCS 400-306931/7
Matrix: Water
Analysis Batch: 306931

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

Lab Sample ID: 400-121711-B-7 MS
Matrix: Water
Analysis Batch: 306931

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4	F1 F2	10.0	42.9	F1	mg/L		429	77 - 128

Lab Sample ID: 400-121711-B-7 MSD
Matrix: Water
Analysis Batch: 306931

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4	F1 F2	10.0	40.6	F1 F2	mg/L		406	77 - 128	6	5

Lab Sample ID: 400-121852-3 DU
Matrix: Ground Water
Analysis Batch: 306931

Client Sample ID: DUP-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	<1.4			<1.4		mg/L		NC	5

Lab Sample ID: MB 400-307308/6
Matrix: Water
Analysis Batch: 307308

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			05/24/16 11:36	1

Lab Sample ID: LCS 400-307308/7
Matrix: Water
Analysis Batch: 307308

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: 400-121941-B-2 MS
Matrix: Water
Analysis Batch: 307308

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4	F1	10.0	<1.4	F1	mg/L		0	77 - 128

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Lab Sample ID: 400-121941-B-2 MSD
Matrix: Water
Analysis Batch: 307308

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4	F1	10.0	<1.4	F1	mg/L		0	77 - 128	NC	5

Lab Sample ID: 400-121852-8 DU
Matrix: Ground Water
Analysis Batch: 307308

Client Sample ID: BAW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	<1.4		<1.4		mg/L		NC	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-252548/1-A
Matrix: Water
Analysis Batch: 256310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 252548

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.007224	U	0.0428	0.0428	1.00	0.0802	pCi/L	05/23/16 12:40	06/14/16 07:17	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					05/23/16 12:40	06/14/16 07:17	1

Lab Sample ID: LCS 160-252548/2-A
Matrix: Water
Analysis Batch: 256310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 252548

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	15.15		1.45	1.00	0.0722	pCi/L	136	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	90.3		40 - 110						

Lab Sample ID: LCSD 160-252548/3-A
Matrix: Water
Analysis Batch: 256310

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 252548

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.2	13.50		1.30	1.00	0.0797	pCi/L	121	68 - 137	0.60	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	95.2		40 - 110								

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-252559/1-A
Matrix: Water
Analysis Batch: 254106

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 252559

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1210	U	0.232	0.232	1.00	0.396	pCi/L	05/23/16 13:17	06/01/16 13:25	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110	05/23/16 13:17	06/01/16 13:25	1
Y Carrier	84.9		40 - 110	05/23/16 13:17	06/01/16 13:25	1

Lab Sample ID: LCS 160-252559/2-A
Matrix: Water
Analysis Batch: 254106

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 252559

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	15.1	19.02		1.99	1.00	0.395	pCi/L	126	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.3		40 - 110
Y Carrier	82.6		40 - 110

Lab Sample ID: LCSD 160-252559/3-A
Matrix: Water
Analysis Batch: 254106

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 252559

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
Radium-228	15.1	19.14		1.97	1.00	0.322	pCi/L	127	56 - 140	0.03	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	95.2		40 - 110
Y Carrier	89.7		40 - 110

Chain of Custody Record

400-121852 COC

Client Information: **Share Bagg / Brett** (Whitman, Cheyenne R)
 Client Contact: **Mr. Curt Sellers** (850-336-0100) (cwsellers@whitman.com)
 Company: **Southern Company**

Address: **PO BOX 2041 GSC8**
 City: **Birmingham**
 State, Zip: **AL 35201**
 Phone: **205-992-7762 (Tel)**
 Email: **CBSSELLER@SOUTHERNCO.COM**

Project Name: **CCR - Plant Daniel**
 CCR #: **40006621**
 SSO#: **SSO#7**

Due Date Requested: _____
 TAT Requested (days): _____
 PO #: _____
 Purchase Order not required
 WO #: _____

Analysis Requested: **400-121852 COC**

Preservation Codes:
 M - Hexane
 N - None
 O - As₂O₃
 P - Na₂O-S
 Q - Nitric Acid
 R - Na₂SO₃
 S - H₂SO₄
 T - TSP Decacrylate
 U - Acetone
 V - MCAA
 W - pH 4.5
 X - Other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=cont, G=grab)	Matrix (None, Solid, Liquid, Gas, Other)	9315, Ra226, 9320, Ra228	SM6500 Cl, F, Gm4500, S04 F	6020, TAT0A	2540C - Total Dissolved Solids	4000 F, C - Fluoride	Special Instructions/Notes
BAW-7	5-17-16	1126 G	G	Water	X	X	X	X	X	PH: 4.92
BAW-1		1257		Water	X	X	X	X	X	PH: 5.23
Dup-01		1080		Water	X	X	X	X	X	PH: 4.92
FB-02		1357		W	X	X	X	X	X	
BAW-4		1480		W	X	X	X	X	X	PH: 5.33
EB-02		1735	G	W	X	X	X	X	X	
BAW-5	5-17-16	1125 G	G	W	X	X	X	X	X	PH: 6.58
BAW-3	5-18-16	1000 G	G	W	X	X	X	X	X	PH: 4.76
BAW-2	5-18-16	1120 G	G	W	X	X	X	X	X	PH: 5.24

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: **Paula Hagedorn** Date: **5-19-16** 0920
 Date/Time: **5-19-16 0920**
 Received By: **[Signature]**
 Received Date/Time: **5/19/16 0920**



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-121852-1

SDG Number: Bottom Ash

Login Number: 121852

List Source: TestAmerica Pensacola

List Number: 1

Creator: Siddoway, Benjamin

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.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.5°C, 1.3°C, 3.0°C, 0.0°C, 0.0°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	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-121852-1

SDG Number: Bottom Ash

Login Number: 121852

List Number: 2

Creator: McKinney, Gerrod E

List Source: TestAmerica St. Louis

List Creation: 05/20/16 12:44 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	14.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

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	06-30-16
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	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16
Kansas	NELAP	7	E-10253	07-31-16 *
Kentucky (UST)	State Program	4	53	06-30-16
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-16
Maryland	State Program	3	233	09-30-16
Massachusetts	State Program	1	M-FL094	06-30-16
Michigan	State Program	5	9912	06-30-16
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	06-30-16
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	06-30-16

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	06-30-16 *
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-16 *
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	06-30-16 *
Louisiana (DW)	NELAP	6	LA160008	12-31-16
Maryland	State Program	3	310	09-30-16
Missouri	State Program	7	780	06-30-16 *
Nevada	State Program	9	MO000542016-1	07-31-16 *
New Jersey	NELAP	2	MO002	06-30-16 *
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-16 *
NRC	NRC		24-24817-01	12-31-22

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-121852-1
SDG: Bottom Ash

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	07-31-16 *
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542015-7	07-31-16
Virginia	NELAP	3	460230	06-14-16 *
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

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: 400-124394-1

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

8/16/2016 5:17:46 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Job ID: 400-124394-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-124394-1

RAD

Method(s) 9315: Radium-226 Prep Batch: 160-260978. The Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) spike recovery (139%) associated with the following samples is outside the upper QC limit of (137%) indicating a potential positive bias for radium-226: BAW-1 (400-124394-1), BAW-2 (400-124394-2), BAW-3 (400-124394-3), BAW-4 (400-124394-4), BAW-5 (400-124394-5), BAW-7 (400-124394-6), DUP-03 (400-124394-7), EQ BLANK-03 (400-124394-8), FB-03 (400-124394-9), (LCS 160-260978/2-A), (MB 160-260978/1-A), (280-85489-A-2-A) and (280-85489-A-2-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) 9320: Radium-228 Prep Batch: 160-260997. The Laboratory Control Sample (LCS) spike recovery (152%) associated with the following samples is outside the upper QC limit of 140% indicating a potential positive bias for radium-228: BAW-1 (400-124394-1), BAW-2 (400-124394-2), BAW-3 (400-124394-3), BAW-4 (400-124394-4), BAW-5 (400-124394-5), BAW-7 (400-124394-6), DUP-03 (400-124394-7), EQ BLANK-03 (400-124394-8), FB-03 (400-124394-9), (280-85489-A-2-C) and (280-85489-A-2-D 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 160-260997: The following sample was prepared at a reduced aliquot due to sediment: BAW-5 (400-124394-5).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-260978: The following sample was prepared at a reduced aliquot due to sediment: BAW-5 (400-124394-5).

Metals

Method(s) 6020: The laboratory control sample (LCS) for preparation batch 314497 and analytical batch 315556 recovered outside control limits for the following analytes: Selenium. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) precision for batch 317637 was 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Lab Sample ID: 400-124394-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.031		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.79		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Cobalt - RA	0.00093	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	24		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.3		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.77				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-2

Lab Sample ID: 400-124394-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.024		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0028		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt - RA	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum - RA	0.0017	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	40		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.7		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.17				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-3

Lab Sample ID: 400-124394-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.95		0.25	0.13	mg/L	5		6020	Total Recoverable
Cadmium - RA	0.00087	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0030		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt - RA	0.0048		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium - RA	0.00041	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	40		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.6		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.5	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.11				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-4

Lab Sample ID: 400-124394-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0073		0.0025	0.00049	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-4 (Continued)

Lab Sample ID: 400-124394-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.032	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	2.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.026		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Arsenic - RA	0.00081	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0015	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt - RA	0.0016	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.3		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.050	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2.4	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.31				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-5

Lab Sample ID: 400-124394-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.50		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	18		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.17		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Arsenic - RA	0.0039		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0024	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt - RA	0.00042	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum - RA	0.0079	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	10		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	15		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.63				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-7

Lab Sample ID: 400-124394-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.62		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt - RA	0.00091	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.93				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
 SDG: Bottom Ash

Client Sample ID: DUP-03

Lab Sample ID: 400-124394-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.024		0.0025	0.00049	mg/L	5		6020	Total
Calcium	1.0		0.25	0.13	mg/L	5		6020	Recoverable Total
Chromium - RA	0.0026		0.0025	0.0011	mg/L	5		6020	Recoverable Total
Cobalt - RA	0.0010	J	0.0025	0.00040	mg/L	5		6020	Recoverable Total
Molybdenum - RA	0.0017	J	0.015	0.00085	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	40		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.17				SU	1		Field Sampling	Total/NA

Client Sample ID: EQ BLANK-03

Lab Sample ID: 400-124394-8

No Detections.

Client Sample ID: FB-03

Lab Sample ID: 400-124394-9

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
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
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
Field Sampling	Field Sampling	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

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

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

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

Laboratory References:

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

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

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-124394-1	BAW-1	Water	07/12/16 14:42	07/13/16 14:58
400-124394-2	BAW-2	Water	07/13/16 06:59	07/13/16 14:58
400-124394-3	BAW-3	Water	07/13/16 10:32	07/13/16 14:58
400-124394-4	BAW-4	Water	07/13/16 09:35	07/13/16 14:58
400-124394-5	BAW-5	Water	07/13/16 08:17	07/13/16 14:58
400-124394-6	BAW-7	Water	07/12/16 13:40	07/13/16 14:58
400-124394-7	DUP-03	Water	07/13/16 05:59	07/13/16 14:58
400-124394-8	EQ BLANK-03	Water	07/13/16 09:44	07/13/16 14:58
400-124394-9	FB-03	Water	07/13/16 08:30	07/13/16 14:58

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 07/12/16 14:42
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.031		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 18:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/21/16 18:32	5
Boron	<0.021		0.050	0.021	mg/L		07/18/16 09:00	07/21/16 18:32	5
Calcium	0.79		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 18:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 18:32	5
Lithium	0.012		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 18:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 18:32	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 18:02	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 18:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 18:02	5
Cobalt	0.00093	J	0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 18:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 18:02	5
Selenium	<0.00024	*	0.0013	0.00024	mg/L		07/18/16 09:00	07/22/16 18:02	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:53	07/26/16 14:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			07/18/16 16:51	1
Chloride	5.3		2.0	0.60	mg/L			07/28/16 11:26	1
Fluoride	<0.032		0.10	0.032	mg/L			08/07/16 16:07	1
Sulfate	<1.4		5.0	1.4	mg/L			07/29/16 10:36	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.194	*	0.119	0.121	1.00	0.164	pCi/L	07/18/16 12:24	08/09/16 07:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					07/18/16 12:24	08/09/16 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	-0.195	U*	0.229	0.230	1.00	0.437	pCi/L	07/18/16 13:23	08/08/16 13:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					07/18/16 13:23	08/08/16 13:22	1
Y Carrier	90.5		40 - 110					07/18/16 13:23	08/08/16 13:22	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
 SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 07/12/16 14:42
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-1
Matrix: Water

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	-0.00163	U	0.258	0.260	5.00	0.437	pCi/L		08/10/16 05:51	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.77				SU			07/12/16 14:42	1

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- 2
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- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 07/13/16 06:59
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.024		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 18:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/21/16 18:37	5
Boron	<0.021		0.050	0.021	mg/L		07/18/16 09:00	07/21/16 18:37	5
Calcium	1.1		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 18:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 18:37	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 18:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 18:37	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 18:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 18:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:07	5
Chromium	0.0028		0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 18:07	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 18:07	5
Molybdenum	0.0017	J	0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 18:07	5
Selenium	<0.00024	*	0.0013	0.00024	mg/L		07/18/16 09:00	07/22/16 18:07	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:53	07/26/16 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			07/18/16 16:51	1
Chloride	4.7		2.0	0.60	mg/L			07/28/16 11:26	1
Fluoride	<0.032		0.10	0.032	mg/L			08/07/16 16:13	1
Sulfate	<1.4		5.0	1.4	mg/L			07/29/16 10:37	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.143	U *	0.104	0.104	1.00	0.147	pCi/L	07/18/16 12:24	08/09/16 07:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/18/16 12:24	08/09/16 07:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.258	U *	0.215	0.216	1.00	0.340	pCi/L	07/18/16 13:23	08/08/16 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/18/16 13:23	08/08/16 13:21	1
Y Carrier	87.1		40 - 110					07/18/16 13:23	08/08/16 13:21	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
 SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 07/13/16 06:59
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-2
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.401		0.239	0.240	5.00	0.340	pCi/L		08/10/16 05:51	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.17				SU			07/13/16 06:59	1

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- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 07/13/16 10:32
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.016		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 18:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/21/16 18:41	5
Boron	<0.021		0.050	0.021	mg/L		07/18/16 09:00	07/21/16 18:41	5
Calcium	0.95		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 18:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 18:41	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 18:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 18:41	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 18:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 18:11	5
Cadmium	0.00087	J	0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:11	5
Chromium	0.0030		0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 18:11	5
Cobalt	0.0048		0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 18:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 18:11	5
Selenium	0.00041	J	0.0013	0.00024	mg/L		07/18/16 09:00	07/25/16 15:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:53	07/26/16 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			07/18/16 16:51	1
Chloride	6.6		2.0	0.60	mg/L			07/28/16 11:26	1
Fluoride	<0.032		0.10	0.032	mg/L			08/07/16 16:27	1
Sulfate	1.5	J	5.0	1.4	mg/L			07/29/16 10:37	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.211	*	0.135	0.136	1.00	0.182	pCi/L	07/18/16 12:24	08/09/16 07:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	69.5		40 - 110					07/18/16 12:24	08/09/16 07:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.0595	U*	0.348	0.348	1.00	0.609	pCi/L	07/18/16 13:23	08/08/16 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	69.5		40 - 110					07/18/16 13:23	08/08/16 13:21	1
<i>Y Carrier</i>	87.5		40 - 110					07/18/16 13:23	08/08/16 13:21	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
 SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 07/13/16 10:32
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-3
Matrix: Water

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.270	U	0.373	0.374	5.00	0.609	pCi/L		08/10/16 05:51	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.11				SU			07/13/16 10:32	1

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- 2
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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 07/13/16 09:35
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.0073		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 18:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/21/16 18:46	5
Boron	0.032	J	0.050	0.021	mg/L		07/18/16 09:00	07/21/16 18:46	5
Calcium	2.8		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 18:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 18:46	5
Lithium	0.026		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 18:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 18:46	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 18:29	5
Arsenic	0.00081	J	0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 18:29	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:29	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 18:29	5
Cobalt	0.0016	J	0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 18:29	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 18:29	5
Selenium	<0.00024	*	0.0013	0.00024	mg/L		07/18/16 09:00	07/22/16 18:29	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:53	07/26/16 14:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			07/18/16 16:51	1
Chloride	6.3		2.0	0.60	mg/L			07/28/16 11:26	1
Fluoride	0.050	J	0.10	0.032	mg/L			08/07/16 17:09	1
Sulfate	2.4	J	5.0	1.4	mg/L			07/29/16 10:37	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.186	U *	0.145	0.146	1.00	0.223	pCi/L	07/18/16 12:24	08/09/16 07:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					07/18/16 12:24	08/09/16 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	-0.150	U *	0.196	0.197	1.00	0.380	pCi/L	07/18/16 13:23	08/08/16 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					07/18/16 13:23	08/08/16 13:21	1
Y Carrier	89.0		40 - 110					07/18/16 13:23	08/08/16 13:21	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
 SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 07/13/16 09:35
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-4
Matrix: Water

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.0365	U	0.244	0.245	5.00	0.380	pCi/L		08/10/16 05:51	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.31				SU			07/13/16 09:35	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 07/13/16 08:17
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.041		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 18:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/21/16 18:50	5
Boron	0.50		0.050	0.021	mg/L		07/18/16 09:00	07/21/16 18:50	5
Calcium	18		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 18:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 18:50	5
Lithium	0.17		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 18:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 18:50	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 18:34	5
Arsenic	0.0039		0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 18:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:34	5
Chromium	0.0024	J	0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 18:34	5
Cobalt	0.00042	J	0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 18:34	5
Molybdenum	0.0079	J	0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 18:34	5
Selenium	<0.00024	*	0.0013	0.00024	mg/L		07/18/16 09:00	07/22/16 18:34	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:53	07/26/16 14:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			07/18/16 16:51	1
Chloride	10		2.0	0.60	mg/L			07/29/16 11:08	1
Fluoride	0.080	J	0.10	0.032	mg/L			08/07/16 17:16	1
Sulfate	15		5.0	1.4	mg/L			07/29/16 10:37	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.472	*	0.260	0.264	1.00	0.350	pCi/L	07/18/16 12:24	08/09/16 07:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					07/18/16 12:24	08/09/16 07:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.387	U*	0.437	0.438	1.00	0.718	pCi/L	07/18/16 13:23	08/08/16 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					07/18/16 13:23	08/08/16 13:21	1
Y Carrier	86.7		40 - 110					07/18/16 13:23	08/08/16 13:21	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
 SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 07/13/16 08:17
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-5
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.859		0.509	0.512	5.00	0.718	pCi/L		08/10/16 05:51	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.63				SU			07/13/16 08:17	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 07/12/16 13:40
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.011		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 18:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/21/16 18:55	5
Boron	<0.021		0.050	0.021	mg/L		07/18/16 09:00	07/21/16 18:55	5
Calcium	0.62		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 18:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 18:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 18:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 18:55	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 18:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 18:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 18:38	5
Cobalt	0.00091	J	0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 18:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 18:38	5
Selenium	<0.00024	*	0.0013	0.00024	mg/L		07/18/16 09:00	07/22/16 18:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:53	07/26/16 14:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			07/18/16 16:51	1
Chloride	5.0		2.0	0.60	mg/L			07/29/16 11:08	1
Fluoride	<0.032		0.10	0.032	mg/L			08/07/16 16:10	1
Sulfate	<1.4		5.0	1.4	mg/L			07/29/16 15:36	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.0961	U *	0.111	0.111	1.00	0.181	pCi/L	07/18/16 12:24	08/09/16 07:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					07/18/16 12:24	08/09/16 07:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.0684	U *	0.229	0.229	1.00	0.400	pCi/L	07/18/16 13:23	08/08/16 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					07/18/16 13:23	08/08/16 13:21	1
Y Carrier	85.2		40 - 110					07/18/16 13:23	08/08/16 13:21	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
 SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 07/12/16 13:40
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-6
Matrix: Water

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.165	U	0.254	0.255	5.00	0.400	pCi/L		08/10/16 05:51	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.93				SU			07/12/16 13:40	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: DUP-03
Date Collected: 07/13/16 05:59
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-7
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.024		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 19:13	5
Boron	<0.021		0.050	0.021	mg/L		07/18/16 09:00	07/21/16 19:13	5
Calcium	1.0		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 19:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 19:13	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 19:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 19:13	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 18:43	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 18:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:43	5
Chromium	0.0026		0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 18:43	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 18:43	5
Molybdenum	0.0017	J	0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 18:43	5
Selenium	<0.00024	*	0.0013	0.00024	mg/L		07/18/16 09:00	07/22/16 18:43	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:53	07/26/16 14:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			07/18/16 16:51	1
Chloride	4.1		2.0	0.60	mg/L			07/29/16 11:08	1
Fluoride	<0.032		0.10	0.032	mg/L			08/07/16 17:18	1
Sulfate	<1.4		5.0	1.4	mg/L			07/29/16 15:36	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.150	U *	0.110	0.110	1.00	0.156	pCi/L	07/18/16 12:24	08/09/16 07:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.3		40 - 110					07/18/16 12:24	08/09/16 07:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.180	U *	0.225	0.226	1.00	0.373	pCi/L	07/18/16 13:23	08/08/16 13:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.3		40 - 110					07/18/16 13:23	08/08/16 13:20	1
Y Carrier	87.5		40 - 110					07/18/16 13:23	08/08/16 13:20	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
 SDG: Bottom Ash

Client Sample ID: DUP-03
Date Collected: 07/13/16 05:59
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-7
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.330	U	0.250	0.251	5.00	0.373	pCi/L		08/10/16 05:51	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.17				SU			07/13/16 05:59	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: EQ BLANK-03

Lab Sample ID: 400-124394-8

Date Collected: 07/13/16 09:44

Matrix: Water

Date Received: 07/13/16 14:58

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 19:17	5
Boron	<0.021		0.050	0.021	mg/L		07/18/16 09:00	07/21/16 19:17	5
Calcium	<0.13		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 19:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 19:17	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 19:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 19:17	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 18:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 18:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 18:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 18:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 18:47	5
Selenium	<0.00024 *		0.0013	0.00024	mg/L		07/18/16 09:00	07/22/16 18:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:53	07/26/16 14:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/18/16 16:51	1
Chloride	<0.60		2.0	0.60	mg/L			07/29/16 11:08	1
Fluoride	<0.032		0.10	0.032	mg/L			08/07/16 17:20	1
Sulfate	<1.4		5.0	1.4	mg/L			07/29/16 15:36	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00570	U *	0.0829	0.0829	1.00	0.163	pCi/L	07/18/16 12:24	08/09/16 07:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110					07/18/16 12:24	08/09/16 07:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.302	U *	0.201	0.203	1.00	0.408	pCi/L	07/18/16 13:23	08/08/16 13:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110					07/18/16 13:23	08/08/16 13:20	1
Y Carrier	90.1		40 - 110					07/18/16 13:23	08/08/16 13:20	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: EQ BLANK-03

Lab Sample ID: 400-124394-8

Date Collected: 07/13/16 09:44

Matrix: Water

Date Received: 07/13/16 14:58

Method: Ra226_Ra228 - Combined Radium-226 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	0.217	0.219	5.00	0.408	pCi/L		08/10/16 05:51	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 07/13/16 08:30
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-9
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 19:22	5
Boron	<0.021		0.050	0.021	mg/L		07/18/16 09:00	07/21/16 19:22	5
Calcium	<0.13		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 19:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 19:22	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 19:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 19:22	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 18:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 18:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 18:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 18:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 18:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 18:52	5
Selenium	<0.00024 *		0.0013	0.00024	mg/L		07/18/16 09:00	07/22/16 18:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:53	07/26/16 14:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/19/16 17:03	1
Chloride	<0.60		2.0	0.60	mg/L			07/29/16 11:08	1
Fluoride	<0.032		0.10	0.032	mg/L			08/07/16 17:23	1
Sulfate	<1.4		5.0	1.4	mg/L			07/29/16 15:36	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.100	U *	0.105	0.105	1.00	0.166	pCi/L	07/18/16 12:24	08/09/16 07:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					07/18/16 12:24	08/09/16 07:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.101	U *	0.286	0.286	1.00	0.495	pCi/L	07/18/16 13:23	08/08/16 13:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					07/18/16 13:23	08/08/16 13:20	1
Y Carrier	87.5		40 - 110					07/18/16 13:23	08/08/16 13:20	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
 SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 07/13/16 08:30
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-9
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.201	U	0.305	0.305	5.00	0.495	pCi/L		08/10/16 05:51	1

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Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Qualifiers

Metals

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.
*	LCS or LCSD is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
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.

Rad

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 07/12/16 14:42

Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315315	07/21/16 18:32	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315556	07/22/16 18:02	GKP	TAL PEN
Total/NA	Prep	7470A			314267	07/14/16 10:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315804	07/26/16 14:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	314751	07/18/16 16:51	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	316238	07/28/16 11:26	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	317637	08/07/16 16:07	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	316370	07/29/16 10:36	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			260978	07/18/16 12:24	MCJ	TAL SL
Total/NA	Analysis	9315		1	264052	08/09/16 07:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			260997	07/18/16 13:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	263917	08/08/16 13:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264114	08/10/16 05:51	ALS	TAL SL
Total/NA	Analysis	Field Sampling		1	317504	07/12/16 14:42	BWS	TAL PEN

Client Sample ID: BAW-2

Date Collected: 07/13/16 06:59

Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315315	07/21/16 18:37	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315556	07/22/16 18:07	GKP	TAL PEN
Total/NA	Prep	7470A			314267	07/14/16 10:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315804	07/26/16 14:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	314751	07/18/16 16:51	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	316238	07/28/16 11:26	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	317637	08/07/16 16:13	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	316370	07/29/16 10:37	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			260978	07/18/16 12:24	MCJ	TAL SL
Total/NA	Analysis	9315		1	264052	08/09/16 07:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			260997	07/18/16 13:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	263917	08/08/16 13:21	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264114	08/10/16 05:51	ALS	TAL SL
Total/NA	Analysis	Field Sampling		1	317504	07/13/16 06:59	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-3

Lab Sample ID: 400-124394-3

Date Collected: 07/13/16 10:32

Matrix: Water

Date Received: 07/13/16 14:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315315	07/21/16 18:41	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315556	07/22/16 18:11	GKP	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315697	07/25/16 15:40	GKP	TAL PEN
Total/NA	Prep	7470A			314267	07/14/16 10:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315804	07/26/16 14:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	314751	07/18/16 16:51	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	316238	07/28/16 11:26	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	317637	08/07/16 16:27	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	316370	07/29/16 10:37	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			260978	07/18/16 12:24	MCJ	TAL SL
Total/NA	Analysis	9315		1	264052	08/09/16 07:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			260997	07/18/16 13:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	263917	08/08/16 13:21	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264114	08/10/16 05:51	ALS	TAL SL
Total/NA	Analysis	Field Sampling		1	317504	07/13/16 10:32	BWS	TAL PEN

Client Sample ID: BAW-4

Lab Sample ID: 400-124394-4

Date Collected: 07/13/16 09:35

Matrix: Water

Date Received: 07/13/16 14:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315315	07/21/16 18:46	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315556	07/22/16 18:29	GKP	TAL PEN
Total/NA	Prep	7470A			314267	07/14/16 10:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315804	07/26/16 14:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	314751	07/18/16 16:51	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	316238	07/28/16 11:26	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	317639	08/07/16 17:09	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	316370	07/29/16 10:37	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			260978	07/18/16 12:24	MCJ	TAL SL
Total/NA	Analysis	9315		1	264052	08/09/16 07:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			260997	07/18/16 13:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	263917	08/08/16 13:21	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264114	08/10/16 05:51	ALS	TAL SL
Total/NA	Analysis	Field Sampling		1	317504	07/13/16 09:35	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: BAW-5

Lab Sample ID: 400-124394-5

Date Collected: 07/13/16 08:17

Matrix: Water

Date Received: 07/13/16 14:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315315	07/21/16 18:50	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315556	07/22/16 18:34	GKP	TAL PEN
Total/NA	Prep	7470A			314267	07/14/16 10:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315804	07/26/16 14:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	314751	07/18/16 16:51	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	316369	07/29/16 11:08	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	317639	08/07/16 17:16	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	316370	07/29/16 10:37	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			260978	07/18/16 12:24	MCJ	TAL SL
Total/NA	Analysis	9315		1	264052	08/09/16 07:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			260997	07/18/16 13:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	263917	08/08/16 13:21	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264114	08/10/16 05:51	ALS	TAL SL
Total/NA	Analysis	Field Sampling		1	317504	07/13/16 08:17	BWS	TAL PEN

Client Sample ID: BAW-7

Lab Sample ID: 400-124394-6

Date Collected: 07/12/16 13:40

Matrix: Water

Date Received: 07/13/16 14:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315315	07/21/16 18:55	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315556	07/22/16 18:38	GKP	TAL PEN
Total/NA	Prep	7470A			314267	07/14/16 10:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315804	07/26/16 14:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	314751	07/18/16 16:51	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	316369	07/29/16 11:08	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	317637	08/07/16 16:10	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	316445	07/29/16 15:36	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			260978	07/18/16 12:24	MCJ	TAL SL
Total/NA	Analysis	9315		1	264052	08/09/16 07:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			260997	07/18/16 13:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	263917	08/08/16 13:21	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264114	08/10/16 05:51	ALS	TAL SL
Total/NA	Analysis	Field Sampling		1	317504	07/12/16 13:40	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: DUP-03

Lab Sample ID: 400-124394-7

Date Collected: 07/13/16 05:59

Matrix: Water

Date Received: 07/13/16 14:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315315	07/21/16 19:13	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315556	07/22/16 18:43	GKP	TAL PEN
Total/NA	Prep	7470A			314267	07/14/16 10:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315804	07/26/16 14:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	314751	07/18/16 16:51	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	316369	07/29/16 11:08	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	317639	08/07/16 17:18	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	316445	07/29/16 15:36	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			260978	07/18/16 12:24	MCJ	TAL SL
Total/NA	Analysis	9315		1	264052	08/09/16 07:52	ALS	TAL SL
Total/NA	Prep	PrecSep_0			260997	07/18/16 13:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	263917	08/08/16 13:20	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264114	08/10/16 05:51	ALS	TAL SL
Total/NA	Analysis	Field Sampling		1	317504	07/13/16 05:59	BWS	TAL PEN

Client Sample ID: EQ BLANK-03

Lab Sample ID: 400-124394-8

Date Collected: 07/13/16 09:44

Matrix: Water

Date Received: 07/13/16 14:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315315	07/21/16 19:17	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315556	07/22/16 18:47	GKP	TAL PEN
Total/NA	Prep	7470A			314267	07/14/16 10:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315804	07/26/16 14:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	314751	07/18/16 16:51	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	316369	07/29/16 11:08	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	317639	08/07/16 17:20	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	316445	07/29/16 15:36	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			260978	07/18/16 12:24	MCJ	TAL SL
Total/NA	Analysis	9315		1	264052	08/09/16 07:52	ALS	TAL SL
Total/NA	Prep	PrecSep_0			260997	07/18/16 13:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	263917	08/08/16 13:20	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264114	08/10/16 05:51	ALS	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 07/13/16 08:30
Date Received: 07/13/16 14:58

Lab Sample ID: 400-124394-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315315	07/21/16 19:22	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		314497	07/18/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	315556	07/22/16 18:52	GKP	TAL PEN
Total/NA	Prep	7470A			314267	07/14/16 10:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315804	07/26/16 14:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	314903	07/19/16 17:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	316369	07/29/16 11:08	LSS	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	317639	08/07/16 17:23	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	316445	07/29/16 15:36	LSS	TAL PEN
Total/NA	Prep	PrecSep-21			260978	07/18/16 12:24	MCJ	TAL SL
Total/NA	Analysis	9315		1	264052	08/09/16 07:52	ALS	TAL SL
Total/NA	Prep	PrecSep_0			260997	07/18/16 13:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	263917	08/08/16 13:20	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264114	08/10/16 05:51	ALS	TAL SL

Laboratory References:

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

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

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Metals

Prep Batch: 314267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total/NA	Water	7470A	
400-124394-2	BAW-2	Total/NA	Water	7470A	
400-124394-3	BAW-3	Total/NA	Water	7470A	
400-124394-4	BAW-4	Total/NA	Water	7470A	
400-124394-5	BAW-5	Total/NA	Water	7470A	
400-124394-6	BAW-7	Total/NA	Water	7470A	
400-124394-7	DUP-03	Total/NA	Water	7470A	
400-124394-8	EQ BLANK-03	Total/NA	Water	7470A	
400-124394-9	FB-03	Total/NA	Water	7470A	
MB 400-314267/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-314267/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-124344-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-124344-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 314497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total Recoverable	Water	3005A	
400-124394-1 - RA	BAW-1	Total Recoverable	Water	3005A	
400-124394-2	BAW-2	Total Recoverable	Water	3005A	
400-124394-2 - RA	BAW-2	Total Recoverable	Water	3005A	
400-124394-3	BAW-3	Total Recoverable	Water	3005A	
400-124394-3 - RA	BAW-3	Total Recoverable	Water	3005A	
400-124394-4	BAW-4	Total Recoverable	Water	3005A	
400-124394-4 - RA	BAW-4	Total Recoverable	Water	3005A	
400-124394-5	BAW-5	Total Recoverable	Water	3005A	
400-124394-5 - RA	BAW-5	Total Recoverable	Water	3005A	
400-124394-6	BAW-7	Total Recoverable	Water	3005A	
400-124394-6 - RA	BAW-7	Total Recoverable	Water	3005A	
400-124394-7	DUP-03	Total Recoverable	Water	3005A	
400-124394-7 - RA	DUP-03	Total Recoverable	Water	3005A	
400-124394-8	EQ BLANK-03	Total Recoverable	Water	3005A	
400-124394-8 - RA	EQ BLANK-03	Total Recoverable	Water	3005A	
400-124394-9 - RA	FB-03	Total Recoverable	Water	3005A	
400-124394-9	FB-03	Total Recoverable	Water	3005A	
MB 400-314497/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
MB 400-314497/1-A ^5 - RA	Method Blank	Total Recoverable	Water	3005A	
LCS 400-314497/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 400-314497/2-A ^1 - RA	Lab Control Sample	Total Recoverable	Water	3005A	
400-124344-B-2-C MS ^5 - R	Matrix Spike	Total Recoverable	Water	3005A	
400-124344-B-2-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-124344-B-2-D MSD ^5 -	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
400-124344-B-2-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 315315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total Recoverable	Water	6020	314497
400-124394-2	BAW-2	Total Recoverable	Water	6020	314497
400-124394-3	BAW-3	Total Recoverable	Water	6020	314497
400-124394-4	BAW-4	Total Recoverable	Water	6020	314497
400-124394-5	BAW-5	Total Recoverable	Water	6020	314497
400-124394-6	BAW-7	Total Recoverable	Water	6020	314497

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Metals (Continued)

Analysis Batch: 315315 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-7	DUP-03	Total Recoverable	Water	6020	314497
400-124394-8	EQ BLANK-03	Total Recoverable	Water	6020	314497
400-124394-9	FB-03	Total Recoverable	Water	6020	314497
MB 400-314497/1-A ^5	Method Blank	Total Recoverable	Water	6020	314497
LCS 400-314497/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	314497
400-124344-B-2-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	314497
400-124344-B-2-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	314497

Analysis Batch: 315556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1 - RA	BAW-1	Total Recoverable	Water	6020	314497
400-124394-2 - RA	BAW-2	Total Recoverable	Water	6020	314497
400-124394-3 - RA	BAW-3	Total Recoverable	Water	6020	314497
400-124394-4 - RA	BAW-4	Total Recoverable	Water	6020	314497
400-124394-5 - RA	BAW-5	Total Recoverable	Water	6020	314497
400-124394-6 - RA	BAW-7	Total Recoverable	Water	6020	314497
400-124394-7 - RA	DUP-03	Total Recoverable	Water	6020	314497
400-124394-8 - RA	EQ BLANK-03	Total Recoverable	Water	6020	314497
400-124394-9 - RA	FB-03	Total Recoverable	Water	6020	314497
MB 400-314497/1-A ^5 - RA	Method Blank	Total Recoverable	Water	6020	314497
LCS 400-314497/2-A ^1 - RA	Lab Control Sample	Total Recoverable	Water	6020	314497
400-124344-B-2-C MS ^5 - R	Matrix Spike	Total Recoverable	Water	6020	314497
400-124344-B-2-D MSD ^5 -	Matrix Spike Duplicate	Total Recoverable	Water	6020	314497

Analysis Batch: 315697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-3 - RA	BAW-3	Total Recoverable	Water	6020	314497
LCS 400-314497/2-A ^1 - RA	Lab Control Sample	Total Recoverable	Water	6020	314497

Analysis Batch: 315804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total/NA	Water	7470A	314267
400-124394-2	BAW-2	Total/NA	Water	7470A	314267
400-124394-3	BAW-3	Total/NA	Water	7470A	314267
400-124394-4	BAW-4	Total/NA	Water	7470A	314267
400-124394-5	BAW-5	Total/NA	Water	7470A	314267
400-124394-6	BAW-7	Total/NA	Water	7470A	314267
400-124394-7	DUP-03	Total/NA	Water	7470A	314267
400-124394-8	EQ BLANK-03	Total/NA	Water	7470A	314267
400-124394-9	FB-03	Total/NA	Water	7470A	314267
MB 400-314267/14-A	Method Blank	Total/NA	Water	7470A	314267
LCS 400-314267/15-A	Lab Control Sample	Total/NA	Water	7470A	314267
400-124344-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	314267
400-124344-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	314267

General Chemistry

Analysis Batch: 314751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 314751 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-2	BAW-2	Total/NA	Water	SM 2540C	
400-124394-3	BAW-3	Total/NA	Water	SM 2540C	
400-124394-4	BAW-4	Total/NA	Water	SM 2540C	
400-124394-5	BAW-5	Total/NA	Water	SM 2540C	
400-124394-6	BAW-7	Total/NA	Water	SM 2540C	
400-124394-7	DUP-03	Total/NA	Water	SM 2540C	
400-124394-8	EQ BLANK-03	Total/NA	Water	SM 2540C	
MB 400-314751/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-314751/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-124394-5 DU	BAW-5	Total/NA	Water	SM 2540C	

Analysis Batch: 314903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-9	FB-03	Total/NA	Water	SM 2540C	
MB 400-314903/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-314903/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-124458-D-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 316238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total/NA	Water	SM 4500 Cl- E	
400-124394-2	BAW-2	Total/NA	Water	SM 4500 Cl- E	
400-124394-3	BAW-3	Total/NA	Water	SM 4500 Cl- E	
400-124394-4	BAW-4	Total/NA	Water	SM 4500 Cl- E	
MB 400-316238/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-316238/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-316238/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-124344-A-7 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-124344-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	
400-124344-A-6 DU	Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 316369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-5	BAW-5	Total/NA	Water	SM 4500 Cl- E	
400-124394-6	BAW-7	Total/NA	Water	SM 4500 Cl- E	
400-124394-7	DUP-03	Total/NA	Water	SM 4500 Cl- E	
400-124394-8	EQ BLANK-03	Total/NA	Water	SM 4500 Cl- E	
400-124394-9	FB-03	Total/NA	Water	SM 4500 Cl- E	
MB 400-316369/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-316369/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-316369/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-124394-5 MS	BAW-5	Total/NA	Water	SM 4500 Cl- E	
400-124394-5 MSD	BAW-5	Total/NA	Water	SM 4500 Cl- E	
400-124843-F-3 DU	Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 316370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-124394-2	BAW-2	Total/NA	Water	SM 4500 SO4 E	
400-124394-3	BAW-3	Total/NA	Water	SM 4500 SO4 E	
400-124394-4	BAW-4	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 316370 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-5	BAW-5	Total/NA	Water	SM 4500 SO4 E	
MB 400-316370/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-316370/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-316370/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-124344-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-124344-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-124344-A-6 DU	Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 316445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-6	BAW-7	Total/NA	Water	SM 4500 SO4 E	
400-124394-7	DUP-03	Total/NA	Water	SM 4500 SO4 E	
400-124394-8	EQ BLANK-03	Total/NA	Water	SM 4500 SO4 E	
400-124394-9	FB-03	Total/NA	Water	SM 4500 SO4 E	
MB 400-316445/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-316445/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-316445/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-124394-6 MS	BAW-7	Total/NA	Water	SM 4500 SO4 E	
400-124394-6 MSD	BAW-7	Total/NA	Water	SM 4500 SO4 E	
400-125049-A-5 DU	Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 317637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total/NA	Water	SM 4500 F C	
400-124394-2	BAW-2	Total/NA	Water	SM 4500 F C	
400-124394-3	BAW-3	Total/NA	Water	SM 4500 F C	
400-124394-6	BAW-7	Total/NA	Water	SM 4500 F C	
MB 400-317637/4	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-317637/5	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-124344-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-124344-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-124344-A-8 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 317639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-4	BAW-4	Total/NA	Water	SM 4500 F C	
400-124394-5	BAW-5	Total/NA	Water	SM 4500 F C	
400-124394-7	DUP-03	Total/NA	Water	SM 4500 F C	
400-124394-8	EQ BLANK-03	Total/NA	Water	SM 4500 F C	
400-124394-9	FB-03	Total/NA	Water	SM 4500 F C	
MB 400-317639/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-317639/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-124394-4 MS	BAW-4	Total/NA	Water	SM 4500 F C	
400-124394-4 MSD	BAW-4	Total/NA	Water	SM 4500 F C	
400-124804-B-5 DU	Duplicate	Total/NA	Water	SM 4500 F C	

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Rad

Prep Batch: 260978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total/NA	Water	PrecSep-21	
400-124394-2	BAW-2	Total/NA	Water	PrecSep-21	
400-124394-3	BAW-3	Total/NA	Water	PrecSep-21	
400-124394-4	BAW-4	Total/NA	Water	PrecSep-21	
400-124394-5	BAW-5	Total/NA	Water	PrecSep-21	
400-124394-6	BAW-7	Total/NA	Water	PrecSep-21	
400-124394-7	DUP-03	Total/NA	Water	PrecSep-21	
400-124394-8	EQ BLANK-03	Total/NA	Water	PrecSep-21	
400-124394-9	FB-03	Total/NA	Water	PrecSep-21	
MB 160-260978/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-260978/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
280-85489-A-2-B DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 260997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total/NA	Water	PrecSep_0	
400-124394-2	BAW-2	Total/NA	Water	PrecSep_0	
400-124394-3	BAW-3	Total/NA	Water	PrecSep_0	
400-124394-4	BAW-4	Total/NA	Water	PrecSep_0	
400-124394-5	BAW-5	Total/NA	Water	PrecSep_0	
400-124394-6	BAW-7	Total/NA	Water	PrecSep_0	
400-124394-7	DUP-03	Total/NA	Water	PrecSep_0	
400-124394-8	EQ BLANK-03	Total/NA	Water	PrecSep_0	
400-124394-9	FB-03	Total/NA	Water	PrecSep_0	
MB 160-260997/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-260997/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
280-85489-A-2-D DU	Duplicate	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 317504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124394-1	BAW-1	Total/NA	Water	Field Sampling	
400-124394-2	BAW-2	Total/NA	Water	Field Sampling	
400-124394-3	BAW-3	Total/NA	Water	Field Sampling	
400-124394-4	BAW-4	Total/NA	Water	Field Sampling	
400-124394-5	BAW-5	Total/NA	Water	Field Sampling	
400-124394-6	BAW-7	Total/NA	Water	Field Sampling	
400-124394-7	DUP-03	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-314497/1-A ^5
Matrix: Water
Analysis Batch: 315315

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/21/16 16:49	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/18/16 09:00	07/21/16 16:49	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/18/16 09:00	07/21/16 16:49	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/21/16 16:49	5
Boron	<0.021		0.050	0.021	mg/L		07/18/16 09:00	07/21/16 16:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/21/16 16:49	5
Calcium	<0.13		0.25	0.13	mg/L		07/18/16 09:00	07/21/16 16:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/18/16 09:00	07/21/16 16:49	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/18/16 09:00	07/21/16 16:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/18/16 09:00	07/21/16 16:49	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/18/16 09:00	07/21/16 16:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/18/16 09:00	07/21/16 16:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/18/16 09:00	07/21/16 16:49	5

Lab Sample ID: LCS 400-314497/2-A ^1
Matrix: Water
Analysis Batch: 315315

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0553		mg/L		111	80 - 120
Arsenic	0.0500	0.0551		mg/L		110	80 - 120
Barium	0.0500	0.0439		mg/L		88	80 - 120
Beryllium	0.0500	0.0512		mg/L		102	80 - 120
Boron	0.100	0.0964		mg/L		96	80 - 120
Cadmium	0.0500	0.0512		mg/L		102	80 - 120
Calcium	5.00	4.82		mg/L		96	80 - 120
Chromium	0.0500	0.0518		mg/L		104	80 - 120
Cobalt	0.0500	0.0517		mg/L		103	80 - 120
Lead	0.0500	0.0495		mg/L		99	80 - 120
Lithium	0.0500	0.0523		mg/L		105	80 - 120
Molybdenum	0.0500	0.0524		mg/L		105	80 - 120
Thallium	0.0100	0.0104		mg/L		104	80 - 120

Lab Sample ID: 400-124344-B-2-C MS ^5
Matrix: Water
Analysis Batch: 315315

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0575		mg/L		115	75 - 125
Arsenic	<0.00046		0.0500	0.0561		mg/L		112	75 - 125
Barium	0.085		0.0500	0.130		mg/L		91	75 - 125
Beryllium	0.00041	J	0.0500	0.0529		mg/L		105	75 - 125
Boron	0.025	J	0.100	0.136		mg/L		111	75 - 125
Cadmium	<0.00034		0.0500	0.0529		mg/L		106	75 - 125
Calcium	<0.13		5.00	4.88		mg/L		98	75 - 125
Chromium	<0.0011		0.0500	0.0526		mg/L		105	75 - 125
Cobalt	0.0020	J	0.0500	0.0541		mg/L		104	75 - 125
Lead	<0.00035		0.0500	0.0484		mg/L		97	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-124344-B-2-C MS ^5
Matrix: Water
Analysis Batch: 315315

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lithium	0.0035	J	0.0500	0.0536		mg/L		100	75 - 125
Molybdenum	<0.00085		0.0500	0.0533		mg/L		107	75 - 125
Thallium	<0.00085		0.0100	0.0104		mg/L		104	75 - 125

Lab Sample ID: 400-124344-B-2-D MSD ^5
Matrix: Water
Analysis Batch: 315315

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0573		mg/L		115	75 - 125	0	20
Arsenic	<0.00046		0.0500	0.0577		mg/L		115	75 - 125	3	20
Barium	0.085		0.0500	0.131		mg/L		92	75 - 125	0	20
Beryllium	0.00041	J	0.0500	0.0544		mg/L		108	75 - 125	3	20
Boron	0.025	J	0.100	0.131		mg/L		106	75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0535		mg/L		107	75 - 125	1	20
Calcium	<0.13		5.00	4.99		mg/L		100	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0534		mg/L		107	75 - 125	2	20
Cobalt	0.0020	J	0.0500	0.0561		mg/L		108	75 - 125	4	20
Lead	<0.00035		0.0500	0.0495		mg/L		99	75 - 125	2	20
Lithium	0.0035	J	0.0500	0.0534		mg/L		100	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0537		mg/L		107	75 - 125	1	20
Thallium	<0.00085		0.0100	0.0105		mg/L		105	75 - 125	1	20

Method: 6020 - Metals (ICP/MS) - RA

Lab Sample ID: MB 400-314497/1-A ^5
Matrix: Water
Analysis Batch: 315556

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony - RA	<0.0010		0.0025	0.0010	mg/L		07/18/16 09:00	07/22/16 16:32	5
Arsenic - RA	<0.00046		0.0013	0.00046	mg/L		07/18/16 09:00	07/22/16 16:32	5
Beryllium - RA	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 16:32	5
Cadmium - RA	<0.00034		0.0025	0.00034	mg/L		07/18/16 09:00	07/22/16 16:32	5
Chromium - RA	<0.0011		0.0025	0.0011	mg/L		07/18/16 09:00	07/22/16 16:32	5
Cobalt - RA	<0.00040		0.0025	0.00040	mg/L		07/18/16 09:00	07/22/16 16:32	5
Molybdenum - RA	<0.00085		0.015	0.00085	mg/L		07/18/16 09:00	07/22/16 16:32	5
Selenium - RA	<0.00024		0.0013	0.00024	mg/L		07/18/16 09:00	07/22/16 16:32	5

Lab Sample ID: LCS 400-314497/2-A ^1
Matrix: Water
Analysis Batch: 315556

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony - RA	0.0500	0.0545		mg/L		109	80 - 120
Arsenic - RA	0.0500	0.0537		mg/L		107	80 - 120
Beryllium - RA	0.0500	0.0491		mg/L		98	80 - 120
Cadmium - RA	0.0500	0.0511		mg/L		102	80 - 120
Chromium - RA	0.0500	0.0512		mg/L		102	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) - RA (Continued)

Lab Sample ID: LCS 400-314497/2-A ^1
Matrix: Water
Analysis Batch: 315556

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cobalt - RA	0.0500	0.0464		mg/L		93	80 - 120
Molybdenum - RA	0.0500	0.0514		mg/L		103	80 - 120

Lab Sample ID: LCS 400-314497/2-A ^1
Matrix: Water
Analysis Batch: 315697

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Selenium - RA	0.0500	0.0512		mg/L		102	80 - 120

Lab Sample ID: 400-124344-B-2-C MS ^5
Matrix: Water
Analysis Batch: 315556

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Selenium - RA	<0.00024	*	0.0500	0.0531		mg/L		106	75 - 125

Lab Sample ID: 400-124344-B-2-D MSD ^5
Matrix: Water
Analysis Batch: 315556

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 314497

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Selenium - RA	<0.00024	*	0.0500	0.0537		mg/L		107	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-314267/14-A
Matrix: Water
Analysis Batch: 315804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 314267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/14/16 10:49	07/26/16 13:36	1

Lab Sample ID: LCS 400-314267/15-A
Matrix: Water
Analysis Batch: 315804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 314267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00100		mg/L		100	80 - 120

Lab Sample ID: 400-124344-B-1-B MS
Matrix: Water
Analysis Batch: 315804

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 314267

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00200		mg/L		99	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-124344-B-1-C MSD
Matrix: Water
Analysis Batch: 315804

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 314267

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00197		mg/L		98	80 - 120	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-314751/1
Matrix: Water
Analysis Batch: 314751

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/18/16 16:51	1

Lab Sample ID: LCS 400-314751/2
Matrix: Water
Analysis Batch: 314751

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	278		mg/L		95	78 - 122

Lab Sample ID: 400-124394-5 DU
Matrix: Water
Analysis Batch: 314751

Client Sample ID: BAW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	Prepared	RPD	RPD Limit
Total Dissolved Solids	120		122		mg/L			2	5

Lab Sample ID: MB 400-314903/1
Matrix: Water
Analysis Batch: 314903

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/19/16 17:03	1

Lab Sample ID: LCS 400-314903/2
Matrix: Water
Analysis Batch: 314903

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	262		mg/L		89	78 - 122

Lab Sample ID: 400-124458-D-1 DU
Matrix: Water
Analysis Batch: 314903

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	Prepared	RPD	RPD Limit
Total Dissolved Solids	270		268		mg/L			0.7	5

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-316238/6
Matrix: Water
Analysis Batch: 316238

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			07/28/16 09:27	1

Lab Sample ID: LCS 400-316238/7
Matrix: Water
Analysis Batch: 316238

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.0		mg/L		103	90 - 110

Lab Sample ID: MRL 400-316238/3
Matrix: Water
Analysis Batch: 316238

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	1.63	J	mg/L		82	50 - 150

Lab Sample ID: 400-124344-A-7 MS
Matrix: Water
Analysis Batch: 316238

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	5.7		10.0	17.5		mg/L		118	73 - 120

Lab Sample ID: 400-124344-A-7 MSD
Matrix: Water
Analysis Batch: 316238

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	5.7		10.0	17.5		mg/L		118	73 - 120	0	8

Lab Sample ID: 400-124344-A-6 DU
Matrix: Water
Analysis Batch: 316238

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	8.1		8.16		mg/L		0.4	8

Lab Sample ID: MB 400-316369/6
Matrix: Water
Analysis Batch: 316369

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			07/29/16 09:45	1

Lab Sample ID: LCS 400-316369/7
Matrix: Water
Analysis Batch: 316369

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	30.6		mg/L		102	90 - 110

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Lab Sample ID: MRL 400-316369/3
Matrix: Water
Analysis Batch: 316369

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	1.78	J	mg/L		89	50 - 150

Lab Sample ID: 400-124394-5 MS
Matrix: Water
Analysis Batch: 316369

Client Sample ID: BAW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10		10.0	20.2		mg/L		101	73 - 120

Lab Sample ID: 400-124394-5 MSD
Matrix: Water
Analysis Batch: 316369

Client Sample ID: BAW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10		10.0	20.0		mg/L		99	73 - 120	1	8

Lab Sample ID: 400-124843-F-3 DU
Matrix: Water
Analysis Batch: 316369

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	8.4		8.42		mg/L		0.2	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-317637/4
Matrix: Water
Analysis Batch: 317637

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			08/07/16 14:59	1

Lab Sample ID: LCS 400-317637/5
Matrix: Water
Analysis Batch: 317637

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	4.19		mg/L		105	90 - 110

Lab Sample ID: 400-124344-A-1 MS
Matrix: Water
Analysis Batch: 317637

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	0.040	J F2	1.00	1.12		mg/L		108	75 - 125

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-124344-A-1 MSD
Matrix: Water
Analysis Batch: 317637

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	0.040	J F2	1.00	1.05	F2	mg/L		101	75 - 125	6	4

Lab Sample ID: 400-124344-A-8 DU
Matrix: Water
Analysis Batch: 317637

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.040	J	0.0400	J	mg/L		0	4

Lab Sample ID: MB 400-317639/3
Matrix: Water
Analysis Batch: 317639

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			08/07/16 17:01	1

Lab Sample ID: LCS 400-317639/4
Matrix: Water
Analysis Batch: 317639

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	4.19		mg/L		105	90 - 110

Lab Sample ID: 400-124394-4 MS
Matrix: Water
Analysis Batch: 317639

Client Sample ID: BAW-4
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	1.10		mg/L		105	75 - 125

Lab Sample ID: 400-124394-4 MSD
Matrix: Water
Analysis Batch: 317639

Client Sample ID: BAW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.050	J	1.00	1.10		mg/L		105	75 - 125	0	4

Lab Sample ID: 400-124804-B-5 DU
Matrix: Water
Analysis Batch: 317639

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	1.7		1.68		mg/L		0	4

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-316370/6
Matrix: Water
Analysis Batch: 316370

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			07/29/16 09:47	1

Lab Sample ID: LCS 400-316370/7
Matrix: Water
Analysis Batch: 316370

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

Lab Sample ID: MRL 400-316370/3
Matrix: Water
Analysis Batch: 316370

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	3.82	J	mg/L		76	50 - 150

Lab Sample ID: 400-124344-A-1 MS
Matrix: Water
Analysis Batch: 316370

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	3.8	J	10.0	12.3		mg/L		85	77 - 128

Lab Sample ID: 400-124344-A-1 MSD
Matrix: Water
Analysis Batch: 316370

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	3.8	J	10.0	12.4		mg/L		85	77 - 128	0	5

Lab Sample ID: 400-124344-A-6 DU
Matrix: Water
Analysis Batch: 316370

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
Sulfate	<1.4			<1.4		mg/L				NC	5

Lab Sample ID: MB 400-316445/6
Matrix: Water
Analysis Batch: 316445

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			07/29/16 15:36	1

Lab Sample ID: LCS 400-316445/7
Matrix: Water
Analysis Batch: 316445

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		106	90 - 110

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

Lab Sample ID: MRL 400-316445/3
Matrix: Water
Analysis Batch: 316445

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	4.01	J	mg/L		80	50 - 150

Lab Sample ID: 400-124394-6 MS
Matrix: Water
Analysis Batch: 316445

Client Sample ID: BAW-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	8.69		mg/L		87	77 - 128

Lab Sample ID: 400-124394-6 MSD
Matrix: Water
Analysis Batch: 316445

Client Sample ID: BAW-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	8.70		mg/L		87	77 - 128	0	5

Lab Sample ID: 400-125049-A-5 DU
Matrix: Water
Analysis Batch: 316445

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	37		36.9		mg/L		0.6	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-260978/1-A
Matrix: Water
Analysis Batch: 264054

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 260978

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05684	U	0.136	0.136	1.00	0.240	pCi/L	07/18/16 12:24	08/09/16 07:58	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					07/18/16 12:24	08/09/16 07:58	1

Lab Sample ID: LCS 160-260978/2-A
Matrix: Water
Analysis Batch: 264054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 260978

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	15.53	*	1.62	1.00	0.217	pCi/L	139	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	90.6		40 - 110						

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

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

Lab Sample ID: 280-85489-A-2-B DU
Matrix: Water
Analysis Batch: 264054

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 260978

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.483	*	0.2354	*	0.159	1.00	0.232	pCi/L	0.75	1
Carrier	%Yield	DU Qualifier	Limits							
Ba Carrier	87.2		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-260997/1-A
Matrix: Water
Analysis Batch: 263920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 260997

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.05222	U	0.302	0.302	1.00	0.541	pCi/L	07/18/16 13:23	08/08/16 13:10	1
Carrier	%Yield	MB Qualifier	Limits				Prepared		Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110				07/18/16 13:23		08/08/16 13:10	1
Y Carrier	84.1		40 - 110				07/18/16 13:23		08/08/16 13:10	1

Lab Sample ID: LCS 160-260997/2-A
Matrix: Water
Analysis Batch: 263920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 260997


Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.7	22.38	*	2.30	1.00	0.424	pCi/L	152	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	90.6		40 - 110						
Y Carrier	87.9		40 - 110						

Lab Sample ID: 280-85489-A-2-D DU
Matrix: Water
Analysis Batch: 263920

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 260997

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.689	*	0.7443	*	0.358	1.00	0.525	pCi/L	0.08	1
Carrier	%Yield	DU Qualifier	Limits							
Ba Carrier	87.2		40 - 110							
Y Carrier	86.0		40 - 110							

Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR - Plant Daniel Site: Bottom Ash		Lab P/N: Whitnire, Cheyenne R E-Mail: cheyenne.whitnire@testamericainc.com Phone: 850 350 3458 Carrier Tracking No(s): Job #: 1-1	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required W/O #:		Analysis Requested  400-124394 COC	
Sample Identification Sample ID: BAW-1, BAW-2, BAW-3, BAW-4, BAW-5, BAW-7, Dup-03, EQ Blank-03, FB-03 Sample Date: 7/12/16, 7/13/16 Sample Time: 1442, 0659, 1032, 0935, 0817, 1340, 0559, 0944, 0830 Sample Type (C=comp, G=grab): G, G, G, G, G, G, G, G, G Matrix (W=water, S=solid, O=soil, BT=BT, AT=AT): Water, Water, Water, Water, Water, Water, water, water, water		Field Filtered Sample (Yes or No): Perform MS/MSD (Yes or No): 9316_Ra228, 9320_Ra228, Ra226Ra228_GFPc SM4500_Cl_E - Chloride, SM4500_S04_E - Sulfate, 2540C - Total Dissolved Solids, 4500_F_C - Fluoride 6020 - Sp,As,Ba,Bi,Cd,Cr,Cu,Pb,LI,Mo,Se,Tl,7470A - Mercury Field Sampling Parameters	
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:		Preservation Codes: 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)	
Special Instructions/Note: Total Number of Containers:		Special Instructions/Note: Total Number of Containers:	
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:		Method of Shipment:	
Relinquished by: <i>Blair</i> Date/Time: 7/13/16 1458 Company: <i>EDT</i>		Received by: <i>[Signature]</i> Date/Time: 7/13/16 1458 Company:	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: 1.8 3.6	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-124394-1

SDG Number: Bottom Ash

Login Number: 124394

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	1.8°C IR-6
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

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	08-31-16
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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-124394-1
SDG: Bottom Ash

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

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: 400-127140-1

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

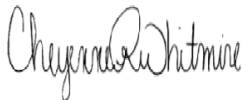
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

10/17/2016 6:03:42 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Job ID: 400-127140-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-127140-1

General Chemistry

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 325706 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 325777 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.

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Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Lab Sample ID: 400-127140-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.036		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.42		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.8	F1	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.98				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-2

Lab Sample ID: 400-127140-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.026		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0014	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00051	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0018	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.04				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-3

Lab Sample ID: 400-127140-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00078	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	0.40		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0063		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00056	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00079	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.000095	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Chloride	5.8		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.6	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.84				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-4

Lab Sample ID: 400-127140-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00069	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.0095		0.0025	0.00049	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-4 (Continued)

Lab Sample ID: 400-127140-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Boron	0.027	J	0.050	0.021	mg/L	5			6020	Total Recoverable
Calcium	2.6		0.25	0.13	mg/L	5			6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5			6020	Total Recoverable
Lithium	0.026		0.0050	0.0032	mg/L	5			6020	Total Recoverable
Total Dissolved Solids	38		5.0	3.4	mg/L	1			SM 2540C	Total/NA
Chloride	6.0		2.0	0.60	mg/L	1			SM 4500 Cl- E	Total/NA
Fluoride	0.040	J	0.10	0.032	mg/L	1			SM 4500 F C	Total/NA
Sulfate	2.4	J	5.0	1.4	mg/L	1			SM 4500 SO4 E	Total/NA
Field pH	5.21				SU	1			Field Sampling	Total/NA

Client Sample ID: BAW-5

Lab Sample ID: 400-127140-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.0039		0.0013	0.00046	mg/L	5			6020	Total Recoverable
Barium	0.046		0.0025	0.00049	mg/L	5			6020	Total Recoverable
Boron	0.27		0.050	0.021	mg/L	5			6020	Total Recoverable
Calcium	19		0.25	0.13	mg/L	5			6020	Total Recoverable
Lithium	0.17		0.0050	0.0032	mg/L	5			6020	Total Recoverable
Molybdenum	0.0038	J	0.015	0.00085	mg/L	5			6020	Total Recoverable
Total Dissolved Solids	92		5.0	3.4	mg/L	1			SM 2540C	Total/NA
Chloride	7.9		2.0	0.60	mg/L	1			SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1			SM 4500 F C	Total/NA
Sulfate	3.4	J	5.0	1.4	mg/L	1			SM 4500 SO4 E	Total/NA
Field pH	6.46				SU	1			Field Sampling	Total/NA

Client Sample ID: BAW-7

Lab Sample ID: 400-127140-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Barium	0.012		0.0025	0.00049	mg/L	5			6020	Total Recoverable
Calcium	0.25		0.25	0.13	mg/L	5			6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5			6020	Total Recoverable
Selenium	0.00031	J	0.0013	0.00024	mg/L	5			6020	Total Recoverable
Total Dissolved Solids	28		5.0	3.4	mg/L	1			SM 2540C	Total/NA
Chloride	5.1		2.0	0.60	mg/L	1			SM 4500 Cl- E	Total/NA
Field pH	4.76				SU	1			Field Sampling	Total/NA

Client Sample ID: DUP-03

Lab Sample ID: 400-127140-7

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
 SDG: Bottom Ash

Client Sample ID: DUP-03 (Continued)

Lab Sample ID: 400-127140-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00076	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	0.80		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0062		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00042	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00062	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.7	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.84				SU	1		Field Sampling	Total/NA

Client Sample ID: EQ BLANK-03

Lab Sample ID: 400-127140-8

No Detections.

Client Sample ID: FB-03

Lab Sample ID: 400-127140-9

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
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
Field Sampling	Field Sampling	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127140-1	BAW-1	Water	09/13/16 13:21	09/14/16 12:13
400-127140-2	BAW-2	Water	09/14/16 06:15	09/14/16 12:13
400-127140-3	BAW-3	Water	09/14/16 07:41	09/14/16 12:13
400-127140-4	BAW-4	Water	09/14/16 09:55	09/14/16 12:13
400-127140-5	BAW-5	Water	09/13/16 15:38	09/14/16 12:13
400-127140-6	BAW-7	Water	09/13/16 12:08	09/14/16 12:13
400-127140-7	DUP-03	Water	09/14/16 06:41	09/14/16 12:13
400-127140-8	EQ BLANK-03	Water	09/14/16 10:15	09/14/16 12:13
400-127140-9	FB-03	Water	09/14/16 10:05	09/14/16 12:13



Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 09/13/16 13:21
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 17:46	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 17:46	5
Barium	0.036		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 17:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 17:46	5
Boron	<0.021		0.050	0.021	mg/L		09/20/16 08:45	09/26/16 17:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 17:46	5
Calcium	0.42		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 17:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 17:46	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 17:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 17:46	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 17:46	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 17:46	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 17:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 17:46	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			09/17/16 17:44	1
Chloride	4.8	F1	2.0	0.60	mg/L			10/06/16 14:12	1
Fluoride	<0.032		0.10	0.032	mg/L			10/09/16 14:26	1
Sulfate	<1.4		5.0	1.4	mg/L			10/06/16 14:14	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.98				SU			09/13/16 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 09/14/16 06:15
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 17:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 17:50	5
Barium	0.026		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 17:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 17:50	5
Boron	<0.021		0.050	0.021	mg/L		09/20/16 08:45	09/26/16 17:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 17:50	5
Calcium	1.1		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 17:50	5
Chromium	0.0014	J	0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 17:50	5
Cobalt	0.00051	J	0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 17:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 17:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 17:50	5
Molybdenum	0.0018	J	0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 17:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 17:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 17:50	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			09/20/16 18:08	1
Chloride	4.5		2.0	0.60	mg/L			10/06/16 15:25	1
Fluoride	<0.032		0.10	0.032	mg/L			10/09/16 16:31	1
Sulfate	<1.4		5.0	1.4	mg/L			10/06/16 15:38	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.04				SU			09/14/16 06:15	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 09/14/16 07:41
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 18:12	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 18:12	5
Barium	0.018		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 18:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:12	5
Boron	<0.021		0.050	0.021	mg/L		09/20/16 08:45	09/26/16 18:12	5
Cadmium	0.00078	J	0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:12	5
Calcium	0.40		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 18:12	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 18:12	5
Cobalt	0.0063		0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 18:12	5
Lead	0.00056	J	0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 18:12	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 18:12	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 18:12	5
Selenium	0.00079	J	0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 18:12	5
Thallium	0.000095	J	0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 18:12	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/20/16 18:08	1
Chloride	5.8		2.0	0.60	mg/L			10/06/16 15:25	1
Fluoride	<0.032		0.10	0.032	mg/L			10/09/16 16:34	1
Sulfate	1.6	J	5.0	1.4	mg/L			10/06/16 15:38	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.84				SU			09/14/16 07:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 09/14/16 09:55
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 18:17	5
Arsenic	0.00069	J	0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 18:17	5
Barium	0.0095		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 18:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:17	5
Boron	0.027	J	0.050	0.021	mg/L		09/20/16 08:45	09/26/16 18:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:17	5
Calcium	2.6		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 18:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 18:17	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 18:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 18:17	5
Lithium	0.026		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 18:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 18:17	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 18:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 18:17	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			09/20/16 18:08	1
Chloride	6.0		2.0	0.60	mg/L			10/06/16 15:27	1
Fluoride	0.040	J	0.10	0.032	mg/L			10/09/16 16:36	1
Sulfate	2.4	J	5.0	1.4	mg/L			10/06/16 15:38	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.21				SU			09/14/16 09:55	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 09/13/16 15:38
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 18:22	5
Arsenic	0.0039		0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 18:22	5
Barium	0.046		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 18:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:22	5
Boron	0.27		0.050	0.021	mg/L		09/20/16 08:45	09/26/16 18:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:22	5
Calcium	19		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 18:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 18:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 18:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 18:22	5
Lithium	0.17		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 18:22	5
Molybdenum	0.0038	J	0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 18:22	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 18:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 18:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	92		5.0	3.4	mg/L			09/17/16 17:44	1
Chloride	7.9		2.0	0.60	mg/L			10/06/16 14:12	1
Fluoride	0.060	J	0.10	0.032	mg/L			10/09/16 14:28	1
Sulfate	3.4	J	5.0	1.4	mg/L			10/06/16 14:14	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.46				SU			09/13/16 15:38	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 09/13/16 12:08
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 18:26	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 18:26	5
Barium	0.012		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 18:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:26	5
Boron	<0.021		0.050	0.021	mg/L		09/20/16 08:45	09/26/16 18:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:26	5
Calcium	0.25		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 18:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 18:26	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 18:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 18:26	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 18:26	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 18:26	5
Selenium	0.00031	J	0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 18:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 18:26	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	28		5.0	3.4	mg/L			09/17/16 17:44	1
Chloride	5.1		2.0	0.60	mg/L			10/06/16 14:45	1
Fluoride	<0.032		0.10	0.032	mg/L			10/09/16 14:30	1
Sulfate	<1.4		5.0	1.4	mg/L			10/06/16 14:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.76				SU			09/13/16 12:08	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: DUP-03
Date Collected: 09/14/16 06:41
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-7
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 18:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 18:44	5
Barium	0.018		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 18:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:44	5
Boron	<0.021		0.050	0.021	mg/L		09/20/16 08:45	09/26/16 18:44	5
Cadmium	0.00076	J	0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 18:44	5
Calcium	0.80		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 18:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 18:44	5
Cobalt	0.0062		0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 18:44	5
Lead	0.00042	J	0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 18:44	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 18:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 18:44	5
Selenium	0.00062	J	0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 18:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 18:44	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			09/20/16 18:08	1
Chloride	6.0		2.0	0.60	mg/L			10/06/16 15:27	1
Fluoride	<0.032		0.10	0.032	mg/L			10/09/16 17:14	1
Sulfate	1.7	J	5.0	1.4	mg/L			10/06/16 15:38	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.84				SU			09/14/16 06:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: EQ BLANK-03

Lab Sample ID: 400-127140-8

Date Collected: 09/14/16 10:15

Matrix: Water

Date Received: 09/14/16 12:13

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 16:25	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 16:25	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 16:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 16:25	5
Boron	<0.021		0.050	0.021	mg/L		09/20/16 08:45	09/26/16 16:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 16:25	5
Calcium	<0.13		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 16:25	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 16:25	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 16:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 16:25	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 16:25	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 16:25	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 16:25	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 16:25	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/21/16 17:45	1
Chloride	<0.60		2.0	0.60	mg/L			10/06/16 16:39	1
Fluoride	<0.032		0.10	0.032	mg/L			10/09/16 17:21	1
Sulfate	<1.4		5.0	1.4	mg/L			10/06/16 16:32	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 09/14/16 10:05
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-9
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 16:29	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 16:29	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 16:29	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 16:29	5
Boron	<0.021		0.050	0.021	mg/L		09/20/16 08:45	09/26/16 16:29	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 16:29	5
Calcium	<0.13		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 16:29	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 16:29	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 16:29	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 16:29	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 16:29	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 16:29	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 16:29	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 16:29	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/21/16 17:45	1
Chloride	<0.60		2.0	0.60	mg/L			10/06/16 16:39	1
Fluoride	<0.032		0.10	0.032	mg/L			10/09/16 17:23	1
Sulfate	<1.4		5.0	1.4	mg/L			10/06/16 16:32	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Qualifiers

Metals

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.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 09/13/16 13:21

Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			323192	09/20/16 08:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	324199	09/26/16 17:46	RJB	TAL PEN
Total/NA	Prep	7470A			322901	09/16/16 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	323375	09/20/16 09:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323021	09/17/16 17:44	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	325706	10/06/16 14:12	SEH	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	325992	10/09/16 14:26	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	325707	10/06/16 14:14	SEH	TAL PEN
Total/NA	Analysis	Field Sampling		1	326092	09/13/16 13:21	BWS	TAL PEN

Client Sample ID: BAW-2

Date Collected: 09/14/16 06:15

Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			323192	09/20/16 08:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	324199	09/26/16 17:50	RJB	TAL PEN
Total/NA	Prep	7470A			322901	09/16/16 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	323375	09/20/16 09:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323428	09/20/16 18:08	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	325777	10/06/16 15:25	SEH	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	326000	10/09/16 16:31	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	325748	10/06/16 15:38	SEH	TAL PEN
Total/NA	Analysis	Field Sampling		1	326092	09/14/16 06:15	BWS	TAL PEN

Client Sample ID: BAW-3

Date Collected: 09/14/16 07:41

Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			323192	09/20/16 08:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	324199	09/26/16 18:12	RJB	TAL PEN
Total/NA	Prep	7470A			322901	09/16/16 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	323375	09/20/16 09:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323428	09/20/16 18:08	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	325777	10/06/16 15:25	SEH	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	326000	10/09/16 16:34	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	325748	10/06/16 15:38	SEH	TAL PEN
Total/NA	Analysis	Field Sampling		1	326092	09/14/16 07:41	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: BAW-4

Date Collected: 09/14/16 09:55

Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			323192	09/20/16 08:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	324199	09/26/16 18:17	RJB	TAL PEN
Total/NA	Prep	7470A			322901	09/16/16 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	323375	09/20/16 09:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323428	09/20/16 18:08	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	325777	10/06/16 15:27	SEH	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	326000	10/09/16 16:36	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	325748	10/06/16 15:38	SEH	TAL PEN
Total/NA	Analysis	Field Sampling		1	326092	09/14/16 09:55	BWS	TAL PEN

Client Sample ID: BAW-5

Date Collected: 09/13/16 15:38

Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			323192	09/20/16 08:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	324199	09/26/16 18:22	RJB	TAL PEN
Total/NA	Prep	7470A			322901	09/16/16 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	323375	09/20/16 09:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323021	09/17/16 17:44	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	325706	10/06/16 14:12	SEH	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	325992	10/09/16 14:28	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	325707	10/06/16 14:14	SEH	TAL PEN
Total/NA	Analysis	Field Sampling		1	326092	09/13/16 15:38	BWS	TAL PEN

Client Sample ID: BAW-7

Date Collected: 09/13/16 12:08

Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			323192	09/20/16 08:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	324199	09/26/16 18:26	RJB	TAL PEN
Total/NA	Prep	7470A			322901	09/16/16 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	323375	09/20/16 09:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323021	09/17/16 17:44	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	325706	10/06/16 14:45	SEH	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	325992	10/09/16 14:30	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	325707	10/06/16 14:52	SEH	TAL PEN
Total/NA	Analysis	Field Sampling		1	326092	09/13/16 12:08	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Client Sample ID: DUP-03

Lab Sample ID: 400-127140-7

Date Collected: 09/14/16 06:41

Matrix: Water

Date Received: 09/14/16 12:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			323192	09/20/16 08:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	324199	09/26/16 18:44	RJB	TAL PEN
Total/NA	Prep	7470A			322901	09/16/16 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	323375	09/20/16 09:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323428	09/20/16 18:08	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	325777	10/06/16 15:27	SEH	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	326001	10/09/16 17:14	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	325748	10/06/16 15:38	SEH	TAL PEN
Total/NA	Analysis	Field Sampling		1	326092	09/14/16 06:41	BWS	TAL PEN

Client Sample ID: EQ BLANK-03

Lab Sample ID: 400-127140-8

Date Collected: 09/14/16 10:15

Matrix: Water

Date Received: 09/14/16 12:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			323192	09/20/16 08:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	324199	09/26/16 16:25	RJB	TAL PEN
Total/NA	Prep	7470A			322901	09/16/16 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	323375	09/20/16 09:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323631	09/21/16 17:45	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	325777	10/06/16 16:39	SEH	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	326001	10/09/16 17:21	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	325748	10/06/16 16:32	SEH	TAL PEN

Client Sample ID: FB-03

Lab Sample ID: 400-127140-9

Date Collected: 09/14/16 10:05

Matrix: Water

Date Received: 09/14/16 12:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			323192	09/20/16 08:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	324199	09/26/16 16:29	RJB	TAL PEN
Total/NA	Prep	7470A			322901	09/16/16 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	323375	09/20/16 09:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323631	09/21/16 17:45	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	325777	10/06/16 16:39	SEH	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	326001	10/09/16 17:23	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	325748	10/06/16 16:32	SEH	TAL PEN

Laboratory References:

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

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Metals

Prep Batch: 322901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total/NA	Water	7470A	
400-127140-2	BAW-2	Total/NA	Water	7470A	
400-127140-3	BAW-3	Total/NA	Water	7470A	
400-127140-4	BAW-4	Total/NA	Water	7470A	
400-127140-5	BAW-5	Total/NA	Water	7470A	
400-127140-6	BAW-7	Total/NA	Water	7470A	
400-127140-7	DUP-03	Total/NA	Water	7470A	
400-127140-8	EQ BLANK-03	Total/NA	Water	7470A	
400-127140-9	FB-03	Total/NA	Water	7470A	
MB 400-322901/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-322901/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-127140-1 MS	BAW-1	Total/NA	Water	7470A	
400-127140-1 MSD	BAW-1	Total/NA	Water	7470A	

Prep Batch: 323192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total Recoverable	Water	3005A	
400-127140-2	BAW-2	Total Recoverable	Water	3005A	
400-127140-3	BAW-3	Total Recoverable	Water	3005A	
400-127140-4	BAW-4	Total Recoverable	Water	3005A	
400-127140-5	BAW-5	Total Recoverable	Water	3005A	
400-127140-6	BAW-7	Total Recoverable	Water	3005A	
400-127140-7	DUP-03	Total Recoverable	Water	3005A	
400-127140-8	EQ BLANK-03	Total Recoverable	Water	3005A	
400-127140-9	FB-03	Total Recoverable	Water	3005A	
MB 400-323192/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-323192/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-127140-2 MS	BAW-2	Total Recoverable	Water	3005A	
400-127140-2 MSD	BAW-2	Total Recoverable	Water	3005A	

Analysis Batch: 323375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total/NA	Water	7470A	322901
400-127140-2	BAW-2	Total/NA	Water	7470A	322901
400-127140-3	BAW-3	Total/NA	Water	7470A	322901
400-127140-4	BAW-4	Total/NA	Water	7470A	322901
400-127140-5	BAW-5	Total/NA	Water	7470A	322901
400-127140-6	BAW-7	Total/NA	Water	7470A	322901
400-127140-7	DUP-03	Total/NA	Water	7470A	322901
400-127140-8	EQ BLANK-03	Total/NA	Water	7470A	322901
400-127140-9	FB-03	Total/NA	Water	7470A	322901
MB 400-322901/14-A	Method Blank	Total/NA	Water	7470A	322901
LCS 400-322901/15-A	Lab Control Sample	Total/NA	Water	7470A	322901
400-127140-1 MS	BAW-1	Total/NA	Water	7470A	322901
400-127140-1 MSD	BAW-1	Total/NA	Water	7470A	322901

Analysis Batch: 324199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total Recoverable	Water	6020	323192
400-127140-2	BAW-2	Total Recoverable	Water	6020	323192
400-127140-3	BAW-3	Total Recoverable	Water	6020	323192

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Metals (Continued)

Analysis Batch: 324199 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-4	BAW-4	Total Recoverable	Water	6020	323192
400-127140-5	BAW-5	Total Recoverable	Water	6020	323192
400-127140-6	BAW-7	Total Recoverable	Water	6020	323192
400-127140-7	DUP-03	Total Recoverable	Water	6020	323192
400-127140-8	EQ BLANK-03	Total Recoverable	Water	6020	323192
400-127140-9	FB-03	Total Recoverable	Water	6020	323192
MB 400-323192/1-A ^5	Method Blank	Total Recoverable	Water	6020	323192
LCS 400-323192/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	323192
400-127140-2 MS	BAW-2	Total Recoverable	Water	6020	323192
400-127140-2 MSD	BAW-2	Total Recoverable	Water	6020	323192

General Chemistry

Analysis Batch: 323021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total/NA	Water	SM 2540C	
400-127140-5	BAW-5	Total/NA	Water	SM 2540C	
400-127140-6	BAW-7	Total/NA	Water	SM 2540C	
MB 400-323021/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-323021/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127140-5 DU	BAW-5	Total/NA	Water	SM 2540C	

Analysis Batch: 323428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-2	BAW-2	Total/NA	Water	SM 2540C	
400-127140-3	BAW-3	Total/NA	Water	SM 2540C	
400-127140-4	BAW-4	Total/NA	Water	SM 2540C	
400-127140-7	DUP-03	Total/NA	Water	SM 2540C	
MB 400-323428/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-323428/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127140-2 DU	BAW-2	Total/NA	Water	SM 2540C	

Analysis Batch: 323631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-8	EQ BLANK-03	Total/NA	Water	SM 2540C	
400-127140-9	FB-03	Total/NA	Water	SM 2540C	
MB 400-323631/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-323631/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127183-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 325706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total/NA	Water	SM 4500 CI- E	
400-127140-5	BAW-5	Total/NA	Water	SM 4500 CI- E	
400-127140-6	BAW-7	Total/NA	Water	SM 4500 CI- E	
MB 400-325706/6	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-325706/7	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-325706/3	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-127140-1 MS	BAW-1	Total/NA	Water	SM 4500 CI- E	
400-127140-1 MSD	BAW-1	Total/NA	Water	SM 4500 CI- E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 325707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-127140-5	BAW-5	Total/NA	Water	SM 4500 SO4 E	
400-127140-6	BAW-7	Total/NA	Water	SM 4500 SO4 E	
MB 400-325707/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-325707/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-325707/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-127140-1 MS	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-127140-1 MSD	BAW-1	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 325748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-2	BAW-2	Total/NA	Water	SM 4500 SO4 E	
400-127140-3	BAW-3	Total/NA	Water	SM 4500 SO4 E	
400-127140-4	BAW-4	Total/NA	Water	SM 4500 SO4 E	
400-127140-7	DUP-03	Total/NA	Water	SM 4500 SO4 E	
400-127140-8	EQ BLANK-03	Total/NA	Water	SM 4500 SO4 E	
400-127140-9	FB-03	Total/NA	Water	SM 4500 SO4 E	
MB 400-325748/18	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-325748/25	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-325748/15	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-127142-A-10 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-127142-A-10 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 325777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-2	BAW-2	Total/NA	Water	SM 4500 CI- E	
400-127140-3	BAW-3	Total/NA	Water	SM 4500 CI- E	
400-127140-4	BAW-4	Total/NA	Water	SM 4500 CI- E	
400-127140-7	DUP-03	Total/NA	Water	SM 4500 CI- E	
400-127140-8	EQ BLANK-03	Total/NA	Water	SM 4500 CI- E	
400-127140-9	FB-03	Total/NA	Water	SM 4500 CI- E	
MB 400-325777/18	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-325777/19	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-325777/15	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-127142-A-10 MS	Matrix Spike	Total/NA	Water	SM 4500 CI- E	
400-127142-A-10 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 325992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total/NA	Water	SM 4500 F C	
400-127140-5	BAW-5	Total/NA	Water	SM 4500 F C	
400-127140-6	BAW-7	Total/NA	Water	SM 4500 F C	
MB 400-325992/5	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-325992/6	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-127559-C-10 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-127559-C-10 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-127142-A-3 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 326000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-2	BAW-2	Total/NA	Water	SM 4500 F C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 326000 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-3	BAW-3	Total/NA	Water	SM 4500 F C	
400-127140-4	BAW-4	Total/NA	Water	SM 4500 F C	
MB 400-326000/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-326000/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-127141-A-6 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-127141-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-127142-A-9 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 326001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-7	DUP-03	Total/NA	Water	SM 4500 F C	
400-127140-8	EQ BLANK-03	Total/NA	Water	SM 4500 F C	
400-127140-9	FB-03	Total/NA	Water	SM 4500 F C	
MB 400-326001/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-326001/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-127140-7 MS	DUP-03	Total/NA	Water	SM 4500 F C	
400-127140-7 MSD	DUP-03	Total/NA	Water	SM 4500 F C	
400-127597-B-6 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 326092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total/NA	Water	Field Sampling	
400-127140-2	BAW-2	Total/NA	Water	Field Sampling	
400-127140-3	BAW-3	Total/NA	Water	Field Sampling	
400-127140-4	BAW-4	Total/NA	Water	Field Sampling	
400-127140-5	BAW-5	Total/NA	Water	Field Sampling	
400-127140-6	BAW-7	Total/NA	Water	Field Sampling	
400-127140-7	DUP-03	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-323192/1-A ^5
Matrix: Water
Analysis Batch: 324199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 323192

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/20/16 08:45	09/26/16 16:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/20/16 08:45	09/26/16 16:10	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/20/16 08:45	09/26/16 16:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 16:10	5
Boron	<0.021		0.050	0.021	mg/L		09/20/16 08:45	09/26/16 16:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/20/16 08:45	09/26/16 16:10	5
Calcium	<0.13		0.25	0.13	mg/L		09/20/16 08:45	09/26/16 16:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/20/16 08:45	09/26/16 16:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/20/16 08:45	09/26/16 16:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/20/16 08:45	09/26/16 16:10	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/20/16 08:45	09/26/16 16:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/20/16 08:45	09/26/16 16:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/20/16 08:45	09/26/16 16:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/20/16 08:45	09/26/16 16:10	5

Lab Sample ID: LCS 400-323192/2-A ^1
Matrix: Water
Analysis Batch: 324199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 323192

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0502		mg/L		100	80 - 120
Arsenic	0.0500	0.0511		mg/L		102	80 - 120
Barium	0.0500	0.0500		mg/L		100	80 - 120
Beryllium	0.0500	0.0467		mg/L		93	80 - 120
Boron	0.100	0.0952		mg/L		95	80 - 120
Cadmium	0.0500	0.0489		mg/L		98	80 - 120
Calcium	5.00	5.01		mg/L		100	80 - 120
Chromium	0.0500	0.0497		mg/L		99	80 - 120
Cobalt	0.0500	0.0518		mg/L		104	80 - 120
Lead	0.0500	0.0494		mg/L		99	80 - 120
Lithium	0.0500	0.0496		mg/L		99	80 - 120
Molybdenum	0.0500	0.0498		mg/L		100	80 - 120
Selenium	0.0500	0.0503		mg/L		101	80 - 120
Thallium	0.0100	0.00986		mg/L		99	80 - 120

Lab Sample ID: 400-127140-2 MS
Matrix: Water
Analysis Batch: 324199

Client Sample ID: BAW-2
Prep Type: Total Recoverable
Prep Batch: 323192

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0522		mg/L		104	75 - 125
Arsenic	<0.00046		0.0500	0.0510		mg/L		102	75 - 125
Barium	0.026		0.0500	0.0801		mg/L		107	75 - 125
Beryllium	<0.00034		0.0500	0.0458		mg/L		92	75 - 125
Boron	<0.021		0.100	0.119		mg/L		119	75 - 125
Cadmium	<0.00034		0.0500	0.0499		mg/L		100	75 - 125
Calcium	1.1		5.00	6.01		mg/L		98	75 - 125
Chromium	0.0014	J	0.0500	0.0502		mg/L		98	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-127140-2 MS
Matrix: Water
Analysis Batch: 324199

Client Sample ID: BAW-2
Prep Type: Total Recoverable
Prep Batch: 323192

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cobalt	0.00051	J	0.0500	0.0529		mg/L		105	75 - 125
Lead	<0.00035		0.0500	0.0509		mg/L		102	75 - 125
Lithium	<0.0032		0.0500	0.0534		mg/L		107	75 - 125
Molybdenum	0.0018	J	0.0500	0.0525		mg/L		101	75 - 125
Selenium	<0.00024		0.0500	0.0518		mg/L		104	75 - 125
Thallium	<0.000085		0.0100	0.0101		mg/L		101	75 - 125

Lab Sample ID: 400-127140-2 MSD
Matrix: Water
Analysis Batch: 324199

Client Sample ID: BAW-2
Prep Type: Total Recoverable
Prep Batch: 323192

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0503		mg/L		101	75 - 125	4	20
Arsenic	<0.00046		0.0500	0.0506		mg/L		101	75 - 125	1	20
Barium	0.026		0.0500	0.0754		mg/L		98	75 - 125	6	20
Beryllium	<0.00034		0.0500	0.0447		mg/L		89	75 - 125	2	20
Boron	<0.021		0.100	0.117		mg/L		117	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0489		mg/L		98	75 - 125	2	20
Calcium	1.1		5.00	6.18		mg/L		102	75 - 125	3	20
Chromium	0.0014	J	0.0500	0.0509		mg/L		99	75 - 125	1	20
Cobalt	0.00051	J	0.0500	0.0530		mg/L		105	75 - 125	0	20
Lead	<0.00035		0.0500	0.0501		mg/L		100	75 - 125	2	20
Lithium	<0.0032		0.0500	0.0524		mg/L		105	75 - 125	2	20
Molybdenum	0.0018	J	0.0500	0.0523		mg/L		101	75 - 125	0	20
Selenium	<0.00024		0.0500	0.0519		mg/L		104	75 - 125	0	20
Thallium	<0.000085		0.0100	0.00994		mg/L		99	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-322901/14-A
Matrix: Water
Analysis Batch: 323375

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 322901

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/16/16 10:51	09/20/16 09:11	1

Lab Sample ID: LCS 400-322901/15-A
Matrix: Water
Analysis Batch: 323375

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 322901

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00115		mg/L		114	80 - 120

Lab Sample ID: 400-127140-1 MS
Matrix: Water
Analysis Batch: 323375

Client Sample ID: BAW-1
Prep Type: Total/NA
Prep Batch: 322901

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00213		mg/L		106	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Lab Sample ID: 400-127140-1 MSD
Matrix: Water
Analysis Batch: 323375

Client Sample ID: BAW-1
Prep Type: Total/NA
Prep Batch: 322901

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00207		mg/L		103	80 - 120	3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-323021/1
Matrix: Water
Analysis Batch: 323021

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/17/16 17:44	1

Lab Sample ID: LCS 400-323021/2
Matrix: Water
Analysis Batch: 323021

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	296		mg/L		101	78 - 122

Lab Sample ID: 400-127140-5 DU
Matrix: Water
Analysis Batch: 323021

Client Sample ID: BAW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	92		92.0		mg/L		0	5

Lab Sample ID: MB 400-323428/1
Matrix: Water
Analysis Batch: 323428

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/20/16 18:08	1

Lab Sample ID: LCS 400-323428/2
Matrix: Water
Analysis Batch: 323428

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	264		mg/L		90	78 - 122

Lab Sample ID: 400-127140-2 DU
Matrix: Water
Analysis Batch: 323428

Client Sample ID: BAW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	10		10.0		mg/L		0	5

Lab Sample ID: MB 400-323631/1
Matrix: Water
Analysis Batch: 323631

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/21/16 17:45	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Lab Sample ID: LCS 400-323631/2
Matrix: Water
Analysis Batch: 323631

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	280		mg/L		96	78 - 122

Lab Sample ID: 400-127183-A-1 DU
Matrix: Water
Analysis Batch: 323631

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	78		78.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-325706/6
Matrix: Water
Analysis Batch: 325706

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			10/06/16 13:41	1

Lab Sample ID: LCS 400-325706/7
Matrix: Water
Analysis Batch: 325706

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	30.1		mg/L		100	90 - 110

Lab Sample ID: MRL 400-325706/3
Matrix: Water
Analysis Batch: 325706

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	1.21	J	mg/L		60	50 - 150

Lab Sample ID: 400-127140-1 MS
Matrix: Water
Analysis Batch: 325706

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.8	F1	10.0	17.4	F1	mg/L		125	73 - 120

Lab Sample ID: 400-127140-1 MSD
Matrix: Water
Analysis Batch: 325706

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.8	F1	10.0	17.0	F1	mg/L		122	73 - 120	2	8

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: MB 400-325777/18
Matrix: Water
Analysis Batch: 325777

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			10/06/16 15:27	1

Lab Sample ID: LCS 400-325777/19
Matrix: Water
Analysis Batch: 325777

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	30.9		mg/L		103	90 - 110

Lab Sample ID: MRL 400-325777/15
Matrix: Water
Analysis Batch: 325777

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	1.38	J	mg/L		69	50 - 150

Lab Sample ID: 400-127142-A-10 MS
Matrix: Water
Analysis Batch: 325777

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	5.0	F1	10.0	17.3	F1	mg/L		123	73 - 120

Lab Sample ID: 400-127142-A-10 MSD
Matrix: Water
Analysis Batch: 325777

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	5.0	F1	10.0	17.2	F1	mg/L		122	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-325992/5
Matrix: Water
Analysis Batch: 325992

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			10/09/16 13:28	1

Lab Sample ID: LCS 400-325992/6
Matrix: Water
Analysis Batch: 325992

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	4.09		mg/L		102	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-127559-C-10 MS
Matrix: Water
Analysis Batch: 325992

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	0.040	J	1.00	1.08		mg/L		104	75 - 125

Lab Sample ID: 400-127559-C-10 MSD
Matrix: Water
Analysis Batch: 325992

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	0.040	J	1.00	1.06		mg/L		102	75 - 125	2	4

Lab Sample ID: 400-127142-A-3 DU
Matrix: Water
Analysis Batch: 325992

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.040	J	0.0400	J	mg/L		0	4

Lab Sample ID: MB 400-326000/3
Matrix: Water
Analysis Batch: 326000

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			10/09/16 15:25	1

Lab Sample ID: LCS 400-326000/4
Matrix: Water
Analysis Batch: 326000

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	4.17		mg/L		104	90 - 110

Lab Sample ID: 400-127141-A-6 MS
Matrix: Water
Analysis Batch: 326000

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	<0.032		1.00	1.04		mg/L		104	75 - 125

Lab Sample ID: 400-127141-A-6 MSD
Matrix: Water
Analysis Batch: 326000

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	<0.032		1.00	1.01		mg/L		101	75 - 125	3	4

Lab Sample ID: 400-127142-A-9 DU
Matrix: Water
Analysis Batch: 326000

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Lab Sample ID: MB 400-326001/3
Matrix: Water
Analysis Batch: 326001

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			10/09/16 17:05	1

Lab Sample ID: LCS 400-326001/4
Matrix: Water
Analysis Batch: 326001

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	4.17		mg/L		104	90 - 110

Lab Sample ID: 400-127140-7 MS
Matrix: Water
Analysis Batch: 326001

Client Sample ID: DUP-03
Prep Type: Total/NA

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

Lab Sample ID: 400-127140-7 MSD
Matrix: Water
Analysis Batch: 326001

Client Sample ID: DUP-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	1.04		mg/L		104	75 - 125	0	4

Lab Sample ID: 400-127597-B-6 DU
Matrix: Water
Analysis Batch: 326001

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.14		0.140		mg/L		0	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-325707/6
Matrix: Water
Analysis Batch: 325707

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			10/06/16 13:43	1

Lab Sample ID: LCS 400-325707/7
Matrix: Water
Analysis Batch: 325707

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	14.3		mg/L		95	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-325707/3
Matrix: Water
Analysis Batch: 325707

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	4.71	J	mg/L		94	50 - 150

Lab Sample ID: 400-127140-1 MS
Matrix: Water
Analysis Batch: 325707

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	10.1		mg/L		101	77 - 128

Lab Sample ID: 400-127140-1 MSD
Matrix: Water
Analysis Batch: 325707

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.1		mg/L		101	77 - 128	0	5

Lab Sample ID: MB 400-325748/18
Matrix: Water
Analysis Batch: 325748

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			10/06/16 15:38	1

Lab Sample ID: LCS 400-325748/25
Matrix: Water
Analysis Batch: 325748

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	14.3		mg/L		95	90 - 110

Lab Sample ID: MRL 400-325748/15
Matrix: Water
Analysis Batch: 325748

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.11	J	mg/L		82	50 - 150

Lab Sample ID: 400-127142-A-10 MS
Matrix: Water
Analysis Batch: 325748

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1.6	J	10.0	9.65		mg/L		81	77 - 128

Lab Sample ID: 400-127142-A-10 MSD
Matrix: Water
Analysis Batch: 325748

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1.6	J	10.0	9.73		mg/L		82	77 - 128	1	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
SDG: Bottom Ash


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Chain of Custody Record

Client Information		Lab P/N: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Client Contact: Mr. Cale Sellers		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-55446-23825.2	
Company: Southern Company		Phone: 850 380 3458		Page: 1-1	
Address: PO BOX 2641 GSC8		City: Birmingham		Job #:	
State, Zip: AL, 35291		PO #: Purchase Order not required		Preservation Codes:	
Phone: 205-992-7762(Tel)		WO #: Project #: 40006621		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 X - other (specify)	
Email: CBSELLER@SOUTHERNCO.COM		Project Name: CCR -Plant Daniel		Other:	
Site: Bottom Ash		SSOW#: 9315_Ra226, 9320_Ra228, Ra226Ra228_GFP		Special Instructions/Note:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=leach, AA=air)	Field Sampling Parameters		Total Number of Containers
					MS/MSD (Yes or No)	Performance	
BAW-1	9/15/16	1321	G	Water	X	X	
BAW-2	9/14/16	0615	G	Water	X	X	
BAW-3	9/14/16	0741	G	Water	X	X	
BAW-4	9/14/16	0155	G	Water	X	X	
BAW-5	9/13/16	1538	G	Water	X	X	
BAW-7	9/13/16	1208	G	Water	X	X	
DUP-03	9/14/16	0641	G	W	X	X	
EQ Blank -03	9/14/16	1015	G	W	X	X	
FB-03	9/14/16	1005	G	W	X	X	

400-127140 COC



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 Reacquired by: _____ Date: _____
 Relinquished by: _____ Date/Time: 9/14/16 1213 Company: Southern Company
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seal No.: _____
 Custody Seals Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks: 2.9°C, 2.8, 2.9, 0.9°C JRG



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127140-1

SDG Number: Bottom Ash

Login Number: 127140

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.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8°C, 2.9°C, 2.9°C, 0.9°C IR-6
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: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-1
 SDG: Bottom Ash

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	07-31-16 *
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
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

* Certification renewal pending - certification considered valid.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-127140-2

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

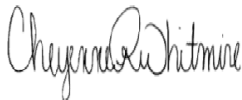
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

10/17/2016 6:10:09 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Job ID: 400-127140-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-127140-2

RAD

Method(s) 9315: Radium-226 Prep Batch 160-271213: The barium carrier recovery is below the 40% QC limit for the method blank (9.97%). The LCS and LCSD spike and carrier recoveries are within control limits, which demonstrates acceptable sample preparation and instrument performance. As such, this was an apparent anomaly in the sample preparation isolated to the MB (see prep NCM 95071), which is not indicative of the entire batch. BAW-1 (400-127140-1), BAW-2 (400-127140-2), BAW-3 (400-127140-3), BAW-4 (400-127140-4), BAW-5 (400-127140-5), BAW-7 (400-127140-6), DUP-03 (400-127140-7), EQ BLANK-03 (400-127140-8), FB-03 (400-127140-9), (LCS 160-271213/2-A), (LCSD 160-271213/3-A) and (MB 160-271213/1-A)

Method(s) 9320: Radium-228 Prep Batch 160-271215: The barium carrier recovery is below the 40% QC limit for the method blank (9.97%). The LCS and LCSD spike and carrier recoveries are within control limits, which demonstrates acceptable sample preparation and instrument performance. As such, this was an apparent anomaly in the sample preparation isolated to the MB (see prep NCM 95072), which is not indicative of the entire batch.

In addition, the low method blank carrier recovery is contributing to an elevated MDC (above the RL). The data have been qualified and reported.

BAW-1 (400-127140-1), BAW-2 (400-127140-2), BAW-3 (400-127140-3), BAW-4 (400-127140-4), BAW-5 (400-127140-5), BAW-7 (400-127140-6), DUP-03 (400-127140-7), EQ BLANK-03 (400-127140-8), FB-03 (400-127140-9), (LCS 160-271215/2-A), (LCSD 160-271215/3-A) and (MB 160-271215/1-A)

Method(s) PrecSep_0: Radium-228 Prep Batch: 160-271215: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: BAW-1 (400-127140-1), BAW-2 (400-127140-2), BAW-3 (400-127140-3), BAW-4 (400-127140-4), BAW-5 (400-127140-5), BAW-7 (400-127140-6), DUP-03 (400-127140-7), EQ BLANK-03 (400-127140-8) and FB-03 (400-127140-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep_0: Radium-228 Prep Batch 160-271215: The barium carrier recovery is outside the lower control limit (40%) for the method blank associated with the following samples:BAW-1 (400-127140-1), BAW-2 (400-127140-2), BAW-3 (400-127140-3), BAW-4 (400-127140-4), BAW-5 (400-127140-5), BAW-7 (400-127140-6), DUP-03 (400-127140-7), EQ BLANK-03 (400-127140-8) and FB-03 (400-127140-9). Some of the barium sulfate pellet was lost during the out of in-growth process when decanting the supernate after the first precipitation.

Method(s) PrecSep-21: Radium-228 Prep Batch: 160-271213: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: BAW-1 (400-127140-1), BAW-2 (400-127140-2), BAW-3 (400-127140-3), BAW-4 (400-127140-4), BAW-5 (400-127140-5), BAW-7 (400-127140-6), DUP-03 (400-127140-7), EQ BLANK-03 (400-127140-8) and FB-03 (400-127140-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-271213:

The barium carrier recovery is outside the lower control limit (40%) for the method blank associated with the following samples:BAW-1 (400-127140-1), BAW-2 (400-127140-2), BAW-3 (400-127140-3), BAW-4 (400-127140-4), BAW-5 (400-127140-5), BAW-7 (400-127140-6), DUP-03 (400-127140-7), EQ BLANK-03 (400-127140-8) and FB-03 (400-127140-9). Some of the barium sulfate pellet was lost during the out of in-growth process when decanting the supernate after the first precipitation.

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127140-1	BAW-1	Water	09/13/16 13:21	09/14/16 12:13
400-127140-2	BAW-2	Water	09/14/16 06:15	09/14/16 12:13
400-127140-3	BAW-3	Water	09/14/16 07:41	09/14/16 12:13
400-127140-4	BAW-4	Water	09/14/16 09:55	09/14/16 12:13
400-127140-5	BAW-5	Water	09/13/16 15:38	09/14/16 12:13
400-127140-6	BAW-7	Water	09/13/16 12:08	09/14/16 12:13
400-127140-7	DUP-03	Water	09/14/16 06:41	09/14/16 12:13
400-127140-8	EQ BLANK-03	Water	09/14/16 10:15	09/14/16 12:13
400-127140-9	FB-03	Water	09/14/16 10:05	09/14/16 12:13

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 09/13/16 13:21
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-1
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.272		0.0849	0.0883	1.00	0.0811	pCi/L	09/22/16 17:15	10/14/16 11:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					09/22/16 17:15	10/14/16 11:20	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.138	U	0.288	0.288	1.00	0.494	pCi/L	09/22/16 17:48	10/08/16 16:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					09/22/16 17:48	10/08/16 16:25	1
Y Carrier	77.4		40 - 110					09/22/16 17:48	10/08/16 16:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.410	U	0.300	0.301	5.00	0.494	pCi/L		10/17/16 01:02	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
 SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 09/14/16 06:15
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-2
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.141		0.0643	0.0656	1.00	0.0794	pCi/L	09/22/16 17:15	10/14/16 11:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					09/22/16 17:15	10/14/16 11:20	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.174	U	0.203	0.203	1.00	0.406	pCi/L	09/22/16 17:48	10/08/16 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					09/22/16 17:48	10/08/16 16:26	1
Y Carrier	84.1		40 - 110					09/22/16 17:48	10/08/16 16:26	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	-0.0330	U	0.213	0.214	5.00	0.406	pCi/L		10/17/16 01:02	1



Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
 SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 09/14/16 07:41
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-3
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0636	U	0.0566	0.0569	1.00	0.0877	pCi/L	09/22/16 17:15	10/14/16 15:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					09/22/16 17:15	10/14/16 15:13	1

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	0.291	0.291	1.00	0.542	pCi/L	09/22/16 17:48	10/08/16 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					09/22/16 17:48	10/08/16 16:26	1
Y Carrier	80.4		40 - 110					09/22/16 17:48	10/08/16 16:26	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	-0.0909	U	0.296	0.297	5.00	0.542	pCi/L		10/17/16 01:02	1



Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 09/14/16 09:55
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-4
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0591	U	0.0665	0.0667	1.00	0.109	pCi/L	09/22/16 17:15	10/14/16 15:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/22/16 17:15	10/14/16 15:13	1

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	0.271	0.272	1.00	0.445	pCi/L	09/22/16 17:48	10/08/16 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/22/16 17:48	10/08/16 16:26	1
Y Carrier	79.3		40 - 110					09/22/16 17:48	10/08/16 16:26	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	0.300	U	0.279	0.280	5.00	0.445	pCi/L		10/17/16 01:02	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
 SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 09/13/16 15:38
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-5
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.203		0.0753	0.0775	1.00	0.0845	pCi/L	09/22/16 17:15	10/14/16 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					09/22/16 17:15	10/14/16 15:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.163	U	0.248	0.249	1.00	0.418	pCi/L	09/22/16 17:48	10/08/16 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					09/22/16 17:48	10/08/16 16:26	1
Y Carrier	80.4		40 - 110					09/22/16 17:48	10/08/16 16:26	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	0.367	U	0.259	0.260	5.00	0.418	pCi/L		10/17/16 01:02	1



Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 09/13/16 12:08
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-6
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.163		0.0713	0.0728	1.00	0.0859	pCi/L	09/22/16 17:15	10/14/16 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					09/22/16 17:15	10/14/16 15:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.178	U	0.261	0.261	1.00	0.439	pCi/L	09/22/16 17:48	10/08/16 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					09/22/16 17:48	10/08/16 16:26	1
Y Carrier	77.8		40 - 110					09/22/16 17:48	10/08/16 16:26	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	0.341	U	0.271	0.271	5.00	0.439	pCi/L		10/17/16 01:02	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Client Sample ID: DUP-03

Lab Sample ID: 400-127140-7

Date Collected: 09/14/16 06:41

Matrix: Water

Date Received: 09/14/16 12:13

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0192	U	0.0556	0.0556	1.00	0.101	pCi/L	09/22/16 17:15	10/14/16 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					09/22/16 17:15	10/14/16 15:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.314	U	0.305	0.306	1.00	0.493	pCi/L	09/22/16 17:48	10/08/16 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					09/22/16 17:48	10/08/16 16:26	1
Y Carrier	78.1		40 - 110					09/22/16 17:48	10/08/16 16:26	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	0.333	U	0.310	0.311	5.00	0.493	pCi/L		10/17/16 01:02	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Client Sample ID: EQ BLANK-03

Lab Sample ID: 400-127140-8

Date Collected: 09/14/16 10:15

Matrix: Water

Date Received: 09/14/16 12:13

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00920	U	0.0399	0.0399	1.00	0.0770	pCi/L	09/22/16 17:15	10/14/16 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					09/22/16 17:15	10/14/16 15:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.104	U	0.266	0.266	1.00	0.460	pCi/L	09/22/16 17:48	10/08/16 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					09/22/16 17:48	10/08/16 16:26	1
Y Carrier	82.6		40 - 110					09/22/16 17:48	10/08/16 16:26	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	0.113	U	0.269	0.269	5.00	0.460	pCi/L		10/17/16 01:02	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
 SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 09/14/16 10:05
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-9
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0761	U	0.0574	0.0579	1.00	0.0844	pCi/L	09/22/16 17:15	10/14/16 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					09/22/16 17:15	10/14/16 15:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.342	U	0.229	0.232	1.00	0.495	pCi/L	09/22/16 17:48	10/08/16 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					09/22/16 17:48	10/08/16 16:26	1
Y Carrier	74.8		40 - 110					09/22/16 17:48	10/08/16 16:26	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	-0.266	U	0.237	0.239	5.00	0.495	pCi/L		10/17/16 01:02	1



Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
X	Carrier is outside acceptance limits.
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.
▫	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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 09/13/16 13:21
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271213	09/22/16 17:15	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 11:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273669	10/08/16 16:25	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

Client Sample ID: BAW-2
Date Collected: 09/14/16 06:15
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271213	09/22/16 17:15	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 11:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273669	10/08/16 16:26	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

Client Sample ID: BAW-3
Date Collected: 09/14/16 07:41
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271213	09/22/16 17:15	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 15:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273669	10/08/16 16:26	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

Client Sample ID: BAW-4
Date Collected: 09/14/16 09:55
Date Received: 09/14/16 12:13

Lab Sample ID: 400-127140-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271213	09/22/16 17:15	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 15:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273669	10/08/16 16:26	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Client Sample ID: BAW-5

Lab Sample ID: 400-127140-5

Date Collected: 09/13/16 15:38

Matrix: Water

Date Received: 09/14/16 12:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271213	09/22/16 17:15	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 15:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273669	10/08/16 16:26	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

Client Sample ID: BAW-7

Lab Sample ID: 400-127140-6

Date Collected: 09/13/16 12:08

Matrix: Water

Date Received: 09/14/16 12:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271213	09/22/16 17:15	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 15:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273669	10/08/16 16:26	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

Client Sample ID: DUP-03

Lab Sample ID: 400-127140-7

Date Collected: 09/14/16 06:41

Matrix: Water

Date Received: 09/14/16 12:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271213	09/22/16 17:15	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 15:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273669	10/08/16 16:26	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

Client Sample ID: EQ BLANK-03

Lab Sample ID: 400-127140-8

Date Collected: 09/14/16 10:15

Matrix: Water

Date Received: 09/14/16 12:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271213	09/22/16 17:15	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 15:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273669	10/08/16 16:26	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Client Sample ID: FB-03

Lab Sample ID: 400-127140-9

Date Collected: 09/14/16 10:05

Matrix: Water

Date Received: 09/14/16 12:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271213	09/22/16 17:15	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 15:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273669	10/08/16 16:26	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

Laboratory References:

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



QC Association Summary

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
 SDG: Bottom Ash

Rad

Prep Batch: 271213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total/NA	Water	PrecSep-21	
400-127140-2	BAW-2	Total/NA	Water	PrecSep-21	
400-127140-3	BAW-3	Total/NA	Water	PrecSep-21	
400-127140-4	BAW-4	Total/NA	Water	PrecSep-21	
400-127140-5	BAW-5	Total/NA	Water	PrecSep-21	
400-127140-6	BAW-7	Total/NA	Water	PrecSep-21	
400-127140-7	DUP-03	Total/NA	Water	PrecSep-21	
400-127140-8	EQ BLANK-03	Total/NA	Water	PrecSep-21	
400-127140-9	FB-03	Total/NA	Water	PrecSep-21	
MB 160-271213/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-271213/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-271213/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 271215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127140-1	BAW-1	Total/NA	Water	PrecSep_0	
400-127140-2	BAW-2	Total/NA	Water	PrecSep_0	
400-127140-3	BAW-3	Total/NA	Water	PrecSep_0	
400-127140-4	BAW-4	Total/NA	Water	PrecSep_0	
400-127140-5	BAW-5	Total/NA	Water	PrecSep_0	
400-127140-6	BAW-7	Total/NA	Water	PrecSep_0	
400-127140-7	DUP-03	Total/NA	Water	PrecSep_0	
400-127140-8	EQ BLANK-03	Total/NA	Water	PrecSep_0	
400-127140-9	FB-03	Total/NA	Water	PrecSep_0	
MB 160-271215/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-271215/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-271215/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-271213/1-A
Matrix: Water
Analysis Batch: 274548

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 271213

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.06507	U	0.270	0.270	1.00	0.567	pCi/L	09/22/16 17:15	10/14/16 11:19	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	9.97	X	40 - 110		09/22/16 17:15	10/14/16 11:19	1			

Lab Sample ID: LCS 160-271213/2-A
Matrix: Water
Analysis Batch: 274548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 271213

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.1	15.08		1.48	1.00	0.111	pCi/L	136	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	74.9	X	40 - 110		09/22/16 17:15	10/14/16 11:19	1		

Lab Sample ID: LCSD 160-271213/3-A
Matrix: Water
Analysis Batch: 274548

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 271213

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.1	14.74		1.44	1.00	0.0807	pCi/L	133	68 - 137	0.11	1
Carrier	LCSD LCSD		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits								
Ba Carrier	80.9	X	40 - 110		09/22/16 17:48	10/08/16 16:23	1				

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-271215/1-A
Matrix: Water
Analysis Batch: 273669

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 271215

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	1.141	U G	2.60	2.60	1.00	4.45	pCi/L	09/22/16 17:48	10/08/16 16:23	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	9.97	X	40 - 110		09/22/16 17:48	10/08/16 16:23	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	77.8	X	40 - 110		09/22/16 17:48	10/08/16 16:23	1			

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
 SDG: Bottom Ash

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

Lab Sample ID: LCS 160-271215/2-A

Matrix: Water

Analysis Batch: 273669

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 271215

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-228	14.5	19.49		2.14	1.00	0.628	pCi/L	135	56 - 140	
Carrier	%Yield	LCS Qualifier	Limits							
Ba Carrier	74.9		40 - 110							
Y Carrier	78.1		40 - 110							

Lab Sample ID: LCSD 160-271215/3-A

Matrix: Water

Analysis Batch: 273669


Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 271215

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.5	20.15		2.17	1.00	0.534	pCi/L	139	56 - 140	0.15	1
Carrier	%Yield	LCSD Qualifier	Limits								
Ba Carrier	80.9		40 - 110								
Y Carrier	78.5		40 - 110								

Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Daniel Site: Bottom Ash		Lab P/N: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): COC No: 400-55446-23825.2 Page: 1-1 Job #:	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006621 SSOW#:		Analysis Requested Field Sampling Parameters Mercury 6020 - Sp,As,Ba,B,Be,Ca,Cd,Cr,Cp,Li,Mn,Se,Tl,7470A - Total Dissolved Solids, 4500 F, C - Fluoride SM4500 Cl, E - Chloride, SM4500 SO4 F - Sulfate, 2540C - 9315 Ra226, 9320 Ra228, Ra226Ra228_GFP Perform MS/MSD (Yes or No)	
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=waste/sl) BT-Tissue, AA=Air		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 X - EDTA Z - other (specify)	
Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=waste/sl) BT-Tissue, AA=Air		Special Instructions/Note: 400-127140 COC 	
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		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/GC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Date/Time: 9/14/16 12:13 Company: [Signature]		Received by: [Signature] Date/Time: 9/14/16 12:13 Company:	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: 2.9C, 2.8, 2.9, 0.9C JRC			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127140-2

SDG Number: Bottom Ash

Login Number: 127140

List Source: TestAmerica Pensacola

List Number: 1

Creator: Siddoway, Benjamin

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.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8°C, 2.9°C, 2.9°C, 0.9°C IR-6
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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

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	07-31-16 *
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
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	10-31-17
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
NRC	NRC		24-24817-01	12-31-22

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-127140-2
SDG: Bottom Ash

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	T104704193-16-10	07-31-17
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



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: 400-130417-1

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

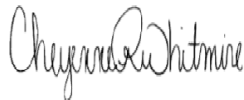
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

1/3/2017 2:11:30 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Job ID: 400-130417-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-130417-1

General Chemistry

Method(s) SM 4500 Cl- E: The method blank for analytical batch 335036 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed.

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Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Lab Sample ID: 400-130417-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.036		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	7.1	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.82				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-2

Lab Sample ID: 400-130417-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00050	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	28		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.1	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.88				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-3

Lab Sample ID: 400-130417-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00054	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	0.62		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0056		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	7.8	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.8	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.74				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-4

Lab Sample ID: 400-130417-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.024	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	2.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0011	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-4 (Continued)

Lab Sample ID: 400-130417-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00042	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.026		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	50		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	7.0	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.040	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	3.3	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.12				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-5

Lab Sample ID: 400-130417-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0037		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.19		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	17		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.18		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0014	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	94		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	9.3	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	3.5	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.38				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-7

Lab Sample ID: 400-130417-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00050	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.36		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00083	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0035	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	38		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.5	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.5	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.56				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-04

Lab Sample ID: 400-130417-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: DUP-04 (Continued)

Lab Sample ID: 400-130417-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.36		0.25	0.13	mg/L	5		6020	Total
Cobalt	0.00085	J	0.0025	0.00040	mg/L	5		6020	Recoverable Total
Lithium	0.0034	J	0.0050	0.0032	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	40		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.5	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.5	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: EB-03

Lab Sample ID: 400-130417-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	0.79	J B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: FB-03

Lab Sample ID: 400-130417-9

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
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
Field Sampling	Field Sampling	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130417-1	BAW-1	Water	11/19/16 10:14	11/21/16 07:40
400-130417-2	BAW-2	Water	11/19/16 10:58	11/21/16 07:40
400-130417-3	BAW-3	Water	11/19/16 12:07	11/21/16 07:40
400-130417-4	BAW-4	Water	11/19/16 13:38	11/21/16 07:40
400-130417-5	BAW-5	Water	11/19/16 15:12	11/21/16 07:40
400-130417-6	BAW-7	Water	11/19/16 09:07	11/21/16 07:40
400-130417-7	DUP-04	Water	11/19/16 08:07	11/21/16 07:40
400-130417-8	EB-03	Water	11/19/16 15:25	11/21/16 07:40
400-130417-9	FB-03	Water	11/19/16 12:45	11/21/16 07:40

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 11/19/16 10:14
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/25/16 18:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/23/16 08:20	11/25/16 18:53	5
Barium	0.036		0.0025	0.00049	mg/L		11/23/16 08:20	11/25/16 18:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 18:53	5
Boron	<0.021		0.050	0.021	mg/L		11/23/16 08:20	11/25/16 18:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 18:53	5
Calcium	1.2		0.25	0.13	mg/L		11/23/16 08:20	11/25/16 18:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/23/16 08:20	11/25/16 18:53	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		11/23/16 08:20	11/25/16 18:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/23/16 08:20	11/25/16 18:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/23/16 08:20	11/25/16 18:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/23/16 08:20	11/25/16 18:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/25/16 18:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/25/16 18:53	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:51	12/07/16 13:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			11/23/16 17:05	1
Chloride	7.1	B	2.0	0.60	mg/L			12/14/16 11:54	1
Fluoride	<0.032		0.10	0.032	mg/L			12/08/16 18:08	1
Sulfate	<1.4		5.0	1.4	mg/L			12/14/16 12:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.82				SU			11/19/16 10:14	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 11/19/16 10:58
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/25/16 18:58	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/23/16 08:20	11/25/16 18:58	5
Barium	0.027		0.0025	0.00049	mg/L		11/23/16 08:20	11/25/16 18:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 18:58	5
Boron	<0.021		0.050	0.021	mg/L		11/23/16 08:20	11/25/16 18:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 18:58	5
Calcium	1.0		0.25	0.13	mg/L		11/23/16 08:20	11/25/16 18:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/23/16 08:20	11/25/16 18:58	5
Cobalt	0.00050	J	0.0025	0.00040	mg/L		11/23/16 08:20	11/25/16 18:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/23/16 08:20	11/25/16 18:58	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/23/16 08:20	11/25/16 18:58	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/23/16 08:20	11/25/16 18:58	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/25/16 18:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/25/16 18:58	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:51	12/07/16 13:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	28		5.0	3.4	mg/L			11/23/16 17:05	1
Chloride	6.1	B	2.0	0.60	mg/L			12/14/16 11:54	1
Fluoride	<0.032		0.10	0.032	mg/L			12/08/16 18:14	1
Sulfate	<1.4		5.0	1.4	mg/L			12/14/16 12:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.88				SU			11/19/16 10:58	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 11/19/16 12:07
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/25/16 19:25	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/23/16 08:20	11/25/16 19:25	5
Barium	0.021		0.0025	0.00049	mg/L		11/23/16 08:20	11/25/16 19:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 19:25	5
Boron	<0.021		0.050	0.021	mg/L		11/23/16 08:20	11/25/16 19:25	5
Cadmium	0.00054	J	0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 19:25	5
Calcium	0.62		0.25	0.13	mg/L		11/23/16 08:20	11/25/16 19:25	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/23/16 08:20	11/25/16 19:25	5
Cobalt	0.0056		0.0025	0.00040	mg/L		11/23/16 08:20	11/25/16 19:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/23/16 08:20	11/25/16 19:25	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/23/16 08:20	11/25/16 19:25	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/23/16 08:20	11/25/16 19:25	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/25/16 19:25	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/25/16 19:25	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:51	12/07/16 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			11/23/16 17:05	1
Chloride	7.8	B	2.0	0.60	mg/L			12/14/16 11:58	1
Fluoride	<0.032		0.10	0.032	mg/L			12/08/16 18:16	1
Sulfate	1.8	J	5.0	1.4	mg/L			12/14/16 12:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.74				SU			11/19/16 12:07	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 11/19/16 13:38
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/25/16 19:29	5
Arsenic	0.0013		0.0013	0.00046	mg/L		11/23/16 08:20	11/25/16 19:29	5
Barium	0.012		0.0025	0.00049	mg/L		11/23/16 08:20	11/25/16 19:29	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 19:29	5
Boron	0.024	J	0.050	0.021	mg/L		11/23/16 08:20	11/25/16 19:29	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 19:29	5
Calcium	2.7		0.25	0.13	mg/L		11/23/16 08:20	11/25/16 19:29	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		11/23/16 08:20	11/25/16 19:29	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		11/23/16 08:20	11/25/16 19:29	5
Lead	0.00042	J	0.0013	0.00035	mg/L		11/23/16 08:20	11/25/16 19:29	5
Lithium	0.026		0.0050	0.0032	mg/L		11/23/16 08:20	11/25/16 19:29	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/23/16 08:20	11/25/16 19:29	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/25/16 19:29	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/25/16 19:29	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:51	12/07/16 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	50		5.0	3.4	mg/L			11/23/16 17:05	1
Chloride	7.0	B	2.0	0.60	mg/L			12/14/16 11:58	1
Fluoride	0.040	J	0.10	0.032	mg/L			12/08/16 18:18	1
Sulfate	3.3	J	5.0	1.4	mg/L			12/14/16 12:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.12				SU			11/19/16 13:38	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 11/19/16 15:12
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/25/16 19:52	5
Arsenic	0.0037		0.0013	0.00046	mg/L		11/23/16 08:20	11/25/16 19:52	5
Barium	0.044		0.0025	0.00049	mg/L		11/23/16 08:20	11/25/16 19:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 19:52	5
Boron	0.19		0.050	0.021	mg/L		11/23/16 08:20	11/25/16 19:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 19:52	5
Calcium	17		0.25	0.13	mg/L		11/23/16 08:20	11/25/16 19:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/23/16 08:20	11/25/16 19:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/23/16 08:20	11/25/16 19:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/23/16 08:20	11/25/16 19:52	5
Lithium	0.18		0.0050	0.0032	mg/L		11/23/16 08:20	11/25/16 19:52	5
Molybdenum	0.0014	J	0.015	0.00085	mg/L		11/23/16 08:20	11/25/16 19:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/25/16 19:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/25/16 19:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:51	12/07/16 13:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	94		5.0	3.4	mg/L			11/23/16 17:05	1
Chloride	9.3	B	2.0	0.60	mg/L			12/14/16 12:31	1
Fluoride	0.060	J	0.10	0.032	mg/L			12/08/16 18:20	1
Sulfate	3.5	J	5.0	1.4	mg/L			12/14/16 12:25	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.38				SU			11/19/16 15:12	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 11/19/16 09:07
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/25/16 19:56	5
Arsenic	0.00050	J	0.0013	0.00046	mg/L		11/23/16 08:20	11/25/16 19:56	5
Barium	0.012		0.0025	0.00049	mg/L		11/23/16 08:20	11/25/16 19:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 19:56	5
Boron	<0.021		0.050	0.021	mg/L		11/23/16 08:20	11/25/16 19:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 19:56	5
Calcium	0.36		0.25	0.13	mg/L		11/23/16 08:20	11/25/16 19:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/23/16 08:20	11/25/16 19:56	5
Cobalt	0.00083	J	0.0025	0.00040	mg/L		11/23/16 08:20	11/25/16 19:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/23/16 08:20	11/25/16 19:56	5
Lithium	0.0035	J	0.0050	0.0032	mg/L		11/23/16 08:20	11/25/16 19:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/23/16 08:20	11/25/16 19:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/25/16 19:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/25/16 19:56	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:51	12/07/16 13:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			11/23/16 17:05	1
Chloride	6.5	B	2.0	0.60	mg/L			12/14/16 12:31	1
Fluoride	<0.032		0.10	0.032	mg/L			12/08/16 18:23	1
Sulfate	1.5	J	5.0	1.4	mg/L			12/14/16 12:25	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.56				SU			11/19/16 09:07	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: DUP-04
Date Collected: 11/19/16 08:07
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-7
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/25/16 20:01	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/23/16 08:20	11/25/16 20:01	5
Barium	0.012		0.0025	0.00049	mg/L		11/23/16 08:20	11/25/16 20:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 20:01	5
Boron	<0.021		0.050	0.021	mg/L		11/23/16 08:20	11/25/16 20:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 20:01	5
Calcium	0.36		0.25	0.13	mg/L		11/23/16 08:20	11/25/16 20:01	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/23/16 08:20	11/25/16 20:01	5
Cobalt	0.00085	J	0.0025	0.00040	mg/L		11/23/16 08:20	11/25/16 20:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/23/16 08:20	11/25/16 20:01	5
Lithium	0.0034	J	0.0050	0.0032	mg/L		11/23/16 08:20	11/25/16 20:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/23/16 08:20	11/25/16 20:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/25/16 20:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/25/16 20:01	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:51	12/07/16 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			11/23/16 17:05	1
Chloride	6.5	B	2.0	0.60	mg/L			12/14/16 12:31	1
Fluoride	<0.032		0.10	0.032	mg/L			12/08/16 18:26	1
Sulfate	1.5	J	5.0	1.4	mg/L			12/14/16 12:25	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: EB-03
Date Collected: 11/19/16 15:25
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-8
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/28/16 12:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/23/16 08:20	11/28/16 12:19	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/23/16 08:20	11/28/16 12:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/28/16 12:19	5
Boron	<0.021		0.050	0.021	mg/L		11/23/16 08:20	11/28/16 12:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/28/16 12:19	5
Calcium	<0.13		0.25	0.13	mg/L		11/23/16 08:20	11/28/16 12:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/23/16 08:20	11/28/16 12:19	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/23/16 08:20	11/28/16 12:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/23/16 08:20	11/28/16 12:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/23/16 08:20	11/28/16 12:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/23/16 08:20	11/28/16 12:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/28/16 12:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/28/16 12:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:51	12/07/16 13:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			11/23/16 17:05	1
Chloride	0.79	J B	2.0	0.60	mg/L			12/14/16 12:31	1
Fluoride	<0.032		0.10	0.032	mg/L			12/08/16 18:28	1
Sulfate	<1.4		5.0	1.4	mg/L			12/14/16 12:25	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 11/19/16 12:45
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-9
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/28/16 12:24	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/23/16 08:20	11/28/16 12:24	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/23/16 08:20	11/28/16 12:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/28/16 12:24	5
Boron	<0.021		0.050	0.021	mg/L		11/23/16 08:20	11/28/16 12:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/28/16 12:24	5
Calcium	<0.13		0.25	0.13	mg/L		11/23/16 08:20	11/28/16 12:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/23/16 08:20	11/28/16 12:24	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/23/16 08:20	11/28/16 12:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/23/16 08:20	11/28/16 12:24	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/23/16 08:20	11/28/16 12:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/23/16 08:20	11/28/16 12:24	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/28/16 12:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/28/16 12:24	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:51	12/07/16 13:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			11/23/16 17:05	1
Chloride	<0.60		2.0	0.60	mg/L			12/14/16 12:31	1
Fluoride	<0.032		0.10	0.032	mg/L			12/08/16 18:39	1
Sulfate	<1.4		5.0	1.4	mg/L			12/14/16 12:26	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Qualifiers

Metals

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.

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.

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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 11/19/16 10:14

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			332162	11/23/16 08:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332706	11/25/16 18:53	AJR	TAL PEN
Total/NA	Prep	7470A			333293	12/01/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	334116	12/07/16 13:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332381	11/23/16 17:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	335036	12/14/16 11:54	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	334315	12/08/16 18:08	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	335039	12/14/16 12:00	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	337162	11/19/16 10:14	BWS	TAL PEN

Client Sample ID: BAW-2

Date Collected: 11/19/16 10:58

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			332162	11/23/16 08:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332706	11/25/16 18:58	AJR	TAL PEN
Total/NA	Prep	7470A			333293	12/01/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	334116	12/07/16 13:20	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332381	11/23/16 17:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	335036	12/14/16 11:54	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	334315	12/08/16 18:14	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	335039	12/14/16 12:00	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	337162	11/19/16 10:58	BWS	TAL PEN

Client Sample ID: BAW-3

Date Collected: 11/19/16 12:07

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			332162	11/23/16 08:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332706	11/25/16 19:25	AJR	TAL PEN
Total/NA	Prep	7470A			333293	12/01/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	334116	12/07/16 13:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332381	11/23/16 17:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	335036	12/14/16 11:58	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	334315	12/08/16 18:16	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	335039	12/14/16 12:00	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	337162	11/19/16 12:07	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: BAW-4

Date Collected: 11/19/16 13:38

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			332162	11/23/16 08:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332706	11/25/16 19:29	AJR	TAL PEN
Total/NA	Prep	7470A			333293	12/01/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	334116	12/07/16 13:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332381	11/23/16 17:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	335036	12/14/16 11:58	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	334315	12/08/16 18:18	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	335039	12/14/16 12:00	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	337162	11/19/16 13:38	BWS	TAL PEN

Client Sample ID: BAW-5

Date Collected: 11/19/16 15:12

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			332162	11/23/16 08:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332706	11/25/16 19:52	AJR	TAL PEN
Total/NA	Prep	7470A			333293	12/01/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	334116	12/07/16 13:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332381	11/23/16 17:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	335036	12/14/16 12:31	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	334315	12/08/16 18:20	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	335039	12/14/16 12:25	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	337162	11/19/16 15:12	BWS	TAL PEN

Client Sample ID: BAW-7

Date Collected: 11/19/16 09:07

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			332162	11/23/16 08:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332706	11/25/16 19:56	AJR	TAL PEN
Total/NA	Prep	7470A			333293	12/01/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	334116	12/07/16 13:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332381	11/23/16 17:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	335036	12/14/16 12:31	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	334315	12/08/16 18:23	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	335039	12/14/16 12:25	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	337162	11/19/16 09:07	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Client Sample ID: DUP-04

Lab Sample ID: 400-130417-7

Date Collected: 11/19/16 08:07

Matrix: Water

Date Received: 11/21/16 07:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			332162	11/23/16 08:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332706	11/25/16 20:01	AJR	TAL PEN
Total/NA	Prep	7470A			333293	12/01/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	334116	12/07/16 13:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332381	11/23/16 17:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	335036	12/14/16 12:31	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	334315	12/08/16 18:26	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	335039	12/14/16 12:25	BJB	TAL PEN

Client Sample ID: EB-03

Lab Sample ID: 400-130417-8

Date Collected: 11/19/16 15:25

Matrix: Water

Date Received: 11/21/16 07:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			332162	11/23/16 08:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332823	11/28/16 12:19	AJR	TAL PEN
Total/NA	Prep	7470A			333293	12/01/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	334116	12/07/16 13:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332381	11/23/16 17:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	335036	12/14/16 12:31	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	334315	12/08/16 18:28	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	335039	12/14/16 12:25	BJB	TAL PEN

Client Sample ID: FB-03

Lab Sample ID: 400-130417-9

Date Collected: 11/19/16 12:45

Matrix: Water

Date Received: 11/21/16 07:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			332162	11/23/16 08:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332823	11/28/16 12:24	AJR	TAL PEN
Total/NA	Prep	7470A			333293	12/01/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	334116	12/07/16 13:39	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332381	11/23/16 17:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	335036	12/14/16 12:31	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	334315	12/08/16 18:39	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	335039	12/14/16 12:26	BJB	TAL PEN

Laboratory References:

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

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Metals

Prep Batch: 332162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total Recoverable	Water	3005A	
400-130417-2	BAW-2	Total Recoverable	Water	3005A	
400-130417-3	BAW-3	Total Recoverable	Water	3005A	
400-130417-4	BAW-4	Total Recoverable	Water	3005A	
400-130417-5	BAW-5	Total Recoverable	Water	3005A	
400-130417-6	BAW-7	Total Recoverable	Water	3005A	
400-130417-7	DUP-04	Total Recoverable	Water	3005A	
400-130417-8	EB-03	Total Recoverable	Water	3005A	
400-130417-9	FB-03	Total Recoverable	Water	3005A	
MB 400-332162/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-332162/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-130417-4 MS	BAW-4	Total Recoverable	Water	3005A	
400-130417-4 MSD	BAW-4	Total Recoverable	Water	3005A	

Analysis Batch: 332706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total Recoverable	Water	6020	332162
400-130417-2	BAW-2	Total Recoverable	Water	6020	332162
400-130417-3	BAW-3	Total Recoverable	Water	6020	332162
400-130417-4	BAW-4	Total Recoverable	Water	6020	332162
400-130417-5	BAW-5	Total Recoverable	Water	6020	332162
400-130417-6	BAW-7	Total Recoverable	Water	6020	332162
400-130417-7	DUP-04	Total Recoverable	Water	6020	332162
MB 400-332162/1-A ^5	Method Blank	Total Recoverable	Water	6020	332162
LCS 400-332162/2-A	Lab Control Sample	Total Recoverable	Water	6020	332162
400-130417-4 MS	BAW-4	Total Recoverable	Water	6020	332162
400-130417-4 MSD	BAW-4	Total Recoverable	Water	6020	332162

Analysis Batch: 332823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-8	EB-03	Total Recoverable	Water	6020	332162
400-130417-9	FB-03	Total Recoverable	Water	6020	332162

Prep Batch: 333293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total/NA	Water	7470A	
400-130417-2	BAW-2	Total/NA	Water	7470A	
400-130417-3	BAW-3	Total/NA	Water	7470A	
400-130417-4	BAW-4	Total/NA	Water	7470A	
400-130417-5	BAW-5	Total/NA	Water	7470A	
400-130417-6	BAW-7	Total/NA	Water	7470A	
400-130417-7	DUP-04	Total/NA	Water	7470A	
400-130417-8	EB-03	Total/NA	Water	7470A	
400-130417-9	FB-03	Total/NA	Water	7470A	
MB 400-333293/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-333293/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-130417-1 MS	BAW-1	Total/NA	Water	7470A	
400-130417-1 MSD	BAW-1	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Metals (Continued)

Analysis Batch: 334116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total/NA	Water	7470A	333293
400-130417-2	BAW-2	Total/NA	Water	7470A	333293
400-130417-3	BAW-3	Total/NA	Water	7470A	333293
400-130417-4	BAW-4	Total/NA	Water	7470A	333293
400-130417-5	BAW-5	Total/NA	Water	7470A	333293
400-130417-6	BAW-7	Total/NA	Water	7470A	333293
400-130417-7	DUP-04	Total/NA	Water	7470A	333293
400-130417-8	EB-03	Total/NA	Water	7470A	333293
400-130417-9	FB-03	Total/NA	Water	7470A	333293
MB 400-333293/14-A	Method Blank	Total/NA	Water	7470A	333293
LCS 400-333293/15-A	Lab Control Sample	Total/NA	Water	7470A	333293
400-130417-1 MS	BAW-1	Total/NA	Water	7470A	333293
400-130417-1 MSD	BAW-1	Total/NA	Water	7470A	333293

General Chemistry

Analysis Batch: 332381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total/NA	Water	SM 2540C	
400-130417-2	BAW-2	Total/NA	Water	SM 2540C	
400-130417-3	BAW-3	Total/NA	Water	SM 2540C	
400-130417-4	BAW-4	Total/NA	Water	SM 2540C	
400-130417-5	BAW-5	Total/NA	Water	SM 2540C	
400-130417-6	BAW-7	Total/NA	Water	SM 2540C	
400-130417-7	DUP-04	Total/NA	Water	SM 2540C	
400-130417-8	EB-03	Total/NA	Water	SM 2540C	
400-130417-9	FB-03	Total/NA	Water	SM 2540C	
MB 400-332381/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-332381/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130406-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
400-130406-A-5 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 334315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total/NA	Water	SM 4500 F C	
400-130417-2	BAW-2	Total/NA	Water	SM 4500 F C	
400-130417-3	BAW-3	Total/NA	Water	SM 4500 F C	
400-130417-4	BAW-4	Total/NA	Water	SM 4500 F C	
400-130417-5	BAW-5	Total/NA	Water	SM 4500 F C	
400-130417-6	BAW-7	Total/NA	Water	SM 4500 F C	
400-130417-7	DUP-04	Total/NA	Water	SM 4500 F C	
400-130417-8	EB-03	Total/NA	Water	SM 4500 F C	
400-130417-9	FB-03	Total/NA	Water	SM 4500 F C	
MB 400-334315/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-334315/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-130417-1 MS	BAW-1	Total/NA	Water	SM 4500 F C	
400-130417-1 MSD	BAW-1	Total/NA	Water	SM 4500 F C	
400-131043-A-1 DU	Duplicate	Total/NA	Water	SM 4500 F C	

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 335036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total/NA	Water	SM 4500 Cl- E	
400-130417-2	BAW-2	Total/NA	Water	SM 4500 Cl- E	
400-130417-3	BAW-3	Total/NA	Water	SM 4500 Cl- E	
400-130417-4	BAW-4	Total/NA	Water	SM 4500 Cl- E	
400-130417-5	BAW-5	Total/NA	Water	SM 4500 Cl- E	
400-130417-6	BAW-7	Total/NA	Water	SM 4500 Cl- E	
400-130417-7	DUP-04	Total/NA	Water	SM 4500 Cl- E	
400-130417-8	EB-03	Total/NA	Water	SM 4500 Cl- E	
400-130417-9	FB-03	Total/NA	Water	SM 4500 Cl- E	
MB 400-335036/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-335036/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
LCSD 400-335036/41	Lab Control Sample Dup	Total/NA	Water	SM 4500 Cl- E	
LCSD 400-335036/42	Lab Control Sample Dup	Total/NA	Water	SM 4500 Cl- E	
LCSD 400-335036/43	Lab Control Sample Dup	Total/NA	Water	SM 4500 Cl- E	
MRL 400-335036/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-130406-A-13 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-130406-A-13 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 335039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-130417-2	BAW-2	Total/NA	Water	SM 4500 SO4 E	
400-130417-3	BAW-3	Total/NA	Water	SM 4500 SO4 E	
400-130417-4	BAW-4	Total/NA	Water	SM 4500 SO4 E	
400-130417-5	BAW-5	Total/NA	Water	SM 4500 SO4 E	
400-130417-6	BAW-7	Total/NA	Water	SM 4500 SO4 E	
400-130417-7	DUP-04	Total/NA	Water	SM 4500 SO4 E	
400-130417-8	EB-03	Total/NA	Water	SM 4500 SO4 E	
400-130417-9	FB-03	Total/NA	Water	SM 4500 SO4 E	
MB 400-335039/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-335039/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
LCSD 400-335039/44	Lab Control Sample Dup	Total/NA	Water	SM 4500 SO4 E	
LCSD 400-335039/45	Lab Control Sample Dup	Total/NA	Water	SM 4500 SO4 E	
LCSD 400-335039/46	Lab Control Sample Dup	Total/NA	Water	SM 4500 SO4 E	
MRL 400-335039/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-130406-A-13 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-130406-A-13 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 337162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total/NA	Water	Field Sampling	
400-130417-2	BAW-2	Total/NA	Water	Field Sampling	
400-130417-3	BAW-3	Total/NA	Water	Field Sampling	
400-130417-4	BAW-4	Total/NA	Water	Field Sampling	
400-130417-5	BAW-5	Total/NA	Water	Field Sampling	
400-130417-6	BAW-7	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-332162/1-A ^5
Matrix: Water
Analysis Batch: 332706

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 332162

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/23/16 08:20	11/25/16 14:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/23/16 08:20	11/25/16 14:59	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/23/16 08:20	11/25/16 14:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 14:59	5
Boron	<0.021		0.050	0.021	mg/L		11/23/16 08:20	11/25/16 14:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/23/16 08:20	11/25/16 14:59	5
Calcium	<0.13		0.25	0.13	mg/L		11/23/16 08:20	11/25/16 14:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/23/16 08:20	11/25/16 14:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/23/16 08:20	11/25/16 14:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/23/16 08:20	11/25/16 14:59	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/23/16 08:20	11/25/16 14:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/23/16 08:20	11/25/16 14:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/23/16 08:20	11/25/16 14:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/23/16 08:20	11/25/16 14:59	5

Lab Sample ID: LCS 400-332162/2-A
Matrix: Water
Analysis Batch: 332706

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 332162

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0508		mg/L		102	80 - 120
Arsenic	0.0500	0.0509		mg/L		102	80 - 120
Barium	0.0500	0.0497		mg/L		99	80 - 120
Beryllium	0.0500	0.0484		mg/L		97	80 - 120
Boron	0.100	0.0953		mg/L		95	80 - 120
Cadmium	0.0500	0.0494		mg/L		99	80 - 120
Calcium	5.00	4.78		mg/L		96	80 - 120
Chromium	0.0500	0.0484		mg/L		97	80 - 120
Cobalt	0.0500	0.0490		mg/L		98	80 - 120
Lead	0.0500	0.0487		mg/L		97	80 - 120
Lithium	0.0500	0.0535		mg/L		107	80 - 120
Molybdenum	0.0500	0.0492		mg/L		98	80 - 120
Selenium	0.0500	0.0495		mg/L		99	80 - 120
Thallium	0.0100	0.00995		mg/L		100	80 - 120

Lab Sample ID: 400-130417-4 MS
Matrix: Water
Analysis Batch: 332706

Client Sample ID: BAW-4
Prep Type: Total Recoverable
Prep Batch: 332162

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0509		mg/L		102	75 - 125
Arsenic	0.0013		0.0500	0.0533		mg/L		104	75 - 125
Barium	0.012		0.0500	0.0616		mg/L		100	75 - 125
Beryllium	<0.00034		0.0500	0.0497		mg/L		99	75 - 125
Boron	0.024	J	0.100	0.131		mg/L		107	75 - 125
Cadmium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125
Calcium	2.7		5.00	7.54		mg/L		97	75 - 125
Chromium	0.0011	J	0.0500	0.0511		mg/L		100	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-130417-4 MS
Matrix: Water
Analysis Batch: 332706

Client Sample ID: BAW-4
Prep Type: Total Recoverable
Prep Batch: 332162

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0012	J	0.0500	0.0519		mg/L		101	75 - 125
Lead	0.00042	J	0.0500	0.0505		mg/L		100	75 - 125
Lithium	0.026		0.0500	0.0784		mg/L		105	75 - 125
Molybdenum	<0.00085		0.0500	0.0507		mg/L		101	75 - 125
Selenium	<0.00024		0.0500	0.0514		mg/L		103	75 - 125
Thallium	<0.000085		0.0100	0.0101		mg/L		101	75 - 125

Lab Sample ID: 400-130417-4 MSD
Matrix: Water
Analysis Batch: 332706

Client Sample ID: BAW-4
Prep Type: Total Recoverable
Prep Batch: 332162

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0509		mg/L		102	75 - 125	0	20
Arsenic	0.0013		0.0500	0.0537		mg/L		105	75 - 125	1	20
Barium	0.012		0.0500	0.0630		mg/L		103	75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125	1	20
Boron	0.024	J	0.100	0.130		mg/L		106	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0515		mg/L		103	75 - 125	1	20
Calcium	2.7		5.00	7.67		mg/L		100	75 - 125	2	20
Chromium	0.0011	J	0.0500	0.0506		mg/L		99	75 - 125	1	20
Cobalt	0.0012	J	0.0500	0.0519		mg/L		101	75 - 125	0	20
Lead	0.00042	J	0.0500	0.0502		mg/L		100	75 - 125	1	20
Lithium	0.026		0.0500	0.0792		mg/L		107	75 - 125	1	20
Molybdenum	<0.00085		0.0500	0.0504		mg/L		101	75 - 125	0	20
Selenium	<0.00024		0.0500	0.0507		mg/L		101	75 - 125	1	20
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-333293/14-A
Matrix: Water
Analysis Batch: 334116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 333293

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/01/16 09:49	12/07/16 13:12	1

Lab Sample ID: LCS 400-333293/15-A
Matrix: Water
Analysis Batch: 334116

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 333293

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000915		mg/L		91	80 - 120

Lab Sample ID: 400-130417-1 MS
Matrix: Water
Analysis Batch: 334116

Client Sample ID: BAW-1
Prep Type: Total/NA
Prep Batch: 333293

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00179		mg/L		89	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Lab Sample ID: 400-130417-1 MSD
Matrix: Water
Analysis Batch: 334116

Client Sample ID: BAW-1
Prep Type: Total/NA
Prep Batch: 333293
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00176		mg/L		88	80 - 120	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-332381/1
Matrix: Water
Analysis Batch: 332381

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			11/23/16 17:05	1

Lab Sample ID: LCS 400-332381/2
Matrix: Water
Analysis Batch: 332381

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	272		mg/L		93	78 - 122

Lab Sample ID: 400-130406-A-1 DU
Matrix: Water
Analysis Batch: 332381

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	82		82.0		mg/L		0	5

Lab Sample ID: 400-130406-A-5 DU
Matrix: Water
Analysis Batch: 332381

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	44		44.0		mg/L		0	5

Method: SM 4500 CI- E - Chloride, Total

Lab Sample ID: MB 400-335036/6
Matrix: Water
Analysis Batch: 335036

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.794	J	2.0	0.60	mg/L			12/14/16 11:05	1

Lab Sample ID: LCS 400-335036/7
Matrix: Water
Analysis Batch: 335036

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

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: LCSD 400-335036/41
Matrix: Water
Analysis Batch: 335036

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	30.0	30.5		mg/L		102	90 - 110	0	8

Lab Sample ID: LCSD 400-335036/42
Matrix: Water
Analysis Batch: 335036

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	30.0	30.4		mg/L		101	90 - 110	0	8

Lab Sample ID: LCSD 400-335036/43
Matrix: Water
Analysis Batch: 335036

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	30.0	30.3		mg/L		101	90 - 110	0	8

Lab Sample ID: MRL 400-335036/3
Matrix: Water
Analysis Batch: 335036

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2.00	3.00		mg/L		150	50 - 150		

Lab Sample ID: 400-130406-A-13 MS
Matrix: Water
Analysis Batch: 335036

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
Chloride	8.6	B	10.0	18.9		mg/L		103	73 - 120		

Lab Sample ID: 400-130406-A-13 MSD
Matrix: Water
Analysis Batch: 335036

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	8.6	B	10.0	19.0		mg/L		104	73 - 120	0	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-334315/3
Matrix: Water
Analysis Batch: 334315

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			12/08/16 18:00	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 400-334315/4
Matrix: Water
Analysis Batch: 334315

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	4.03		mg/L		101	90 - 110

Lab Sample ID: 400-130417-1 MS
Matrix: Water
Analysis Batch: 334315

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	0.940		mg/L		94	75 - 125

Lab Sample ID: 400-130417-1 MSD
Matrix: Water
Analysis Batch: 334315

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	0.980		mg/L		98	75 - 125	4	4

Lab Sample ID: 400-131043-A-1 DU
Matrix: Water
Analysis Batch: 334315

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	0.25			0.260		mg/L				4	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-335039/6
Matrix: Water
Analysis Batch: 335039

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			12/14/16 11:07	1

Lab Sample ID: LCS 400-335039/7
Matrix: Water
Analysis Batch: 335039

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	15.1		mg/L		101	90 - 110

Lab Sample ID: LCSD 400-335039/44
Matrix: Water
Analysis Batch: 335039

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	15.0	15.0		mg/L		100	90 - 110	1	5

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
SDG: Bottom Ash

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: LCSD 400-335039/45
Matrix: Water
Analysis Batch: 335039

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	15.0	15.1		mg/L		101	90 - 110	0	5

Lab Sample ID: LCSD 400-335039/46
Matrix: Water
Analysis Batch: 335039

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	15.0	14.9		mg/L		100	90 - 110	1	5

Lab Sample ID: MRL 400-335039/3
Matrix: Water
Analysis Batch: 335039

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	5.00	4.83	J	mg/L		97	50 - 150		

Lab Sample ID: 400-130406-A-13 MS
Matrix: Water
Analysis Batch: 335039

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	4.7	J	10.0	15.4		mg/L		107	77 - 128		

Lab Sample ID: 400-130406-A-13 MSD
Matrix: Water
Analysis Batch: 335039

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	15.3		mg/L		106	77 - 128	0	5

Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762 (Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Daniel Site: Bottom Ash		Lab PIV: Whitmire, Cheyenne R. E-Mail: cheyenne.whitmire@testamericainc.com Phone: 850 380 3458 Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006621 SSOV#:		Carrier Tracking No(s): Job #: 1-1 COC No: 400-55446-23825.2 Page: 1-1		
Analysis Requested Field Sampling Parameters Mercury 6020 - Sp,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,Pl,Mo,Se,Tl, 7470A - SM4500.CI.E - Chloride, SM4500.S04.E - Sulfate, 2540C - 9316.Ra226, 9320.Ra228, Ra228Ra228.GFPC Perform MS/SD (Yes or No)		Field Filtered Sample (Yes or No)		Preservation Codes: 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) Other:		
Sample Identification Sample ID Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=other, A=air) Presentation Code		Total Number of Containers		Special Instructions/Note: 400-130417 COC		
BAW-1	11/19/16	1011	G	Water	X	
BAW-2	11/18/16	1058	G	Water	X	
BAW-3	11/19/16	1207	G	Water	X	
BAW-4	11/19/16	1338	G	Water	X	
BAW-5	11/19/16	1512	G	Water	X	
BAW-7	11/19/16	0907	G	Water	X	
DUP-04	11/19/16	0907	G	water	X	
EB-03	11/19/16	1525	G	water	X	
FB-03	11/19/16	1345	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)		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:		Method of Shipment:		
Relinquished by:		Date/Time: 11/21/16 0740		Company: TAC		
Relinquished by:		Date/Time:		Company:		
Relinquished by:		Date/Time:		Company:		
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 0.0, 0.0 - FAS		Received by:		



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130417-1

SDG Number: Bottom Ash

Login Number: 130417

List Number: 1

Creator: Hughes, Nicholas T

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	0.0°C, 0.0°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 <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: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-1
 SDG: Bottom Ash

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	12-31-16 *
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	12-31-17
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

* Certification renewal pending - certification considered valid.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-130417-2

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

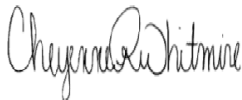
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

12/31/2016 3:11:14 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Job ID: 400-130417-2

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-130417-2**

RAD

Method(s) 9315: Radium-226 Prep Batch 160-281400: The RPD/RER for the sample duplicate (400-130400-A-7-A DU) is outside acceptance criteria (40%/1; 357%/1.12). However, the activity for both the sample (400-130400-C-7-A) and the duplicate is below the MDC. Batch precision is demonstrated by a passing RER for sample duplicate 400-130400-A-2-A DU (0.82). The data have been qualified and reported. BAW-1 (400-130417-1), BAW-2 (400-130417-2), BAW-3 (400-130417-3), BAW-4 (400-130417-4), BAW-5 (400-130417-5), BAW-7 (400-130417-6), DUP-04 (400-130417-7), EB-03 (400-130417-8), FB-03 (400-130417-9), (LCS 160-281400/2-A), (MB 160-281400/1-A), (400-130400-C-2-A), (400-130400-A-2-A DU), (400-130400-C-7-A) and (400-130400-A-7-A DU)

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Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130417-1	BAW-1	Water	11/19/16 10:14	11/21/16 07:40
400-130417-2	BAW-2	Water	11/19/16 10:58	11/21/16 07:40
400-130417-3	BAW-3	Water	11/19/16 12:07	11/21/16 07:40
400-130417-4	BAW-4	Water	11/19/16 13:38	11/21/16 07:40
400-130417-5	BAW-5	Water	11/19/16 15:12	11/21/16 07:40
400-130417-6	BAW-7	Water	11/19/16 09:07	11/21/16 07:40
400-130417-7	DUP-04	Water	11/19/16 08:07	11/21/16 07:40
400-130417-8	EB-03	Water	11/19/16 15:25	11/21/16 07:40
400-130417-9	FB-03	Water	11/19/16 12:45	11/21/16 07:40

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 11/19/16 10:14
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-1
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.172	U	0.188	0.189	1.00	0.303	pCi/L	11/29/16 10:11	12/30/16 11:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					11/29/16 10:11	12/30/16 11:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.612		0.278	0.284	1.00	0.400	pCi/L	11/29/16 10:56	12/29/16 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					11/29/16 10:56	12/29/16 14:06	1
Y Carrier	92.7		40 - 110					11/29/16 10:56	12/29/16 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	0.783		0.336	0.341	5.00	0.400	pCi/L		12/30/16 14:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 11/19/16 10:58
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-2
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.157	U	0.174	0.174	1.00	0.278	pCi/L	11/29/16 10:11	12/30/16 11:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					11/29/16 10:11	12/30/16 11:09	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.201	U	0.208	0.208	1.00	0.338	pCi/L	11/29/16 10:56	12/29/16 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					11/29/16 10:56	12/29/16 14:06	1
Y Carrier	96.8		40 - 110					11/29/16 10:56	12/29/16 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	0.358		0.271	0.272	5.00	0.338	pCi/L		12/30/16 14:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 11/19/16 12:07
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-3
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.117	U	0.186	0.186	1.00	0.322	pCi/L	11/29/16 10:11	12/30/16 11:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					11/29/16 10:11	12/30/16 11:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.300	U	0.246	0.248	1.00	0.392	pCi/L	11/29/16 10:56	12/29/16 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					11/29/16 10:56	12/29/16 14:06	1
Y Carrier	96.1		40 - 110					11/29/16 10:56	12/29/16 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	0.416		0.309	0.310	5.00	0.392	pCi/L		12/30/16 14:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 11/19/16 13:38
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-4
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0668	U	0.310	0.310	1.00	0.594	pCi/L	11/29/16 10:11	12/30/16 11:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	41.0		40 - 110					11/29/16 10:11	12/30/16 11:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.296	U	0.431	0.432	1.00	0.723	pCi/L	11/29/16 10:56	12/29/16 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	41.0		40 - 110					11/29/16 10:56	12/29/16 14:06	1
Y Carrier	98.7		40 - 110					11/29/16 10:56	12/29/16 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	0.363	U	0.531	0.532	5.00	0.723	pCi/L		12/30/16 14:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 11/19/16 15:12
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-5
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.135	U	0.182	0.183	1.00	0.307	pCi/L	11/29/16 10:11	12/30/16 11:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.9		40 - 110					11/29/16 10:11	12/30/16 11:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.253	U	0.250	0.252	1.00	0.406	pCi/L	11/29/16 10:56	12/29/16 14:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.9		40 - 110					11/29/16 10:56	12/29/16 14:06	1
Y Carrier	92.3		40 - 110					11/29/16 10:56	12/29/16 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	0.388	U	0.310	0.311	5.00	0.406	pCi/L		12/30/16 14:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 11/19/16 09:07
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-6
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.105	U	0.178	0.178	1.00	0.312	pCi/L	11/29/16 10:11	12/30/16 11:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					11/29/16 10:11	12/30/16 11:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0762	U	0.225	0.225	1.00	0.390	pCi/L	11/29/16 10:56	12/29/16 14:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					11/29/16 10:56	12/29/16 14:07	1
Y Carrier	92.7		40 - 110					11/29/16 10:56	12/29/16 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	0.182	U	0.287	0.287	5.00	0.390	pCi/L		12/30/16 14:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: DUP-04

Date Collected: 11/19/16 08:07

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-7

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.189	U	0.195	0.196	1.00	0.308	pCi/L	11/29/16 10:11	12/30/16 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					11/29/16 10:11	12/30/16 11:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.122	U	0.195	0.196	1.00	0.330	pCi/L	11/29/16 10:56	12/29/16 14:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					11/29/16 10:56	12/29/16 14:07	1
Y Carrier	97.9		40 - 110					11/29/16 10:56	12/29/16 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	0.312	U	0.276	0.277	5.00	0.330	pCi/L		12/30/16 14:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: EB-03
Date Collected: 11/19/16 15:25
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-8
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.190	U	0.147	0.148	1.00	0.384	pCi/L	11/29/16 10:11	12/30/16 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					11/29/16 10:11	12/30/16 11:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.167	U	0.217	0.217	1.00	0.360	pCi/L	11/29/16 10:56	12/29/16 14:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					11/29/16 10:56	12/29/16 14:07	1
Y Carrier	95.0		40 - 110					11/29/16 10:56	12/29/16 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	-0.0229	U	0.262	0.263	5.00	0.384	pCi/L		12/30/16 14:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 11/19/16 12:45
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-9
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.156	U	0.189	0.190	1.00	0.310	pCi/L	11/29/16 10:11	12/30/16 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					11/29/16 10:11	12/30/16 11:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0894	U	0.211	0.211	1.00	0.363	pCi/L	11/29/16 10:56	12/29/16 14:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					11/29/16 10:56	12/29/16 14:07	1
Y Carrier	96.1		40 - 110					11/29/16 10:56	12/29/16 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	0.246	U	0.283	0.284	5.00	0.363	pCi/L		12/30/16 14:46	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
F	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 11/19/16 10:14

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281400	11/29/16 10:11	AS	TAL SL
Total/NA	Analysis	9315		1	285872	12/30/16 11:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281415	11/29/16 10:56	AS	TAL SL
Total/NA	Analysis	9320		1	285757	12/29/16 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285935	12/30/16 14:46	RTM	TAL SL

Client Sample ID: BAW-2

Date Collected: 11/19/16 10:58

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281400	11/29/16 10:11	AS	TAL SL
Total/NA	Analysis	9315		1	285872	12/30/16 11:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281415	11/29/16 10:56	AS	TAL SL
Total/NA	Analysis	9320		1	285757	12/29/16 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285935	12/30/16 14:46	RTM	TAL SL

Client Sample ID: BAW-3

Date Collected: 11/19/16 12:07

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281400	11/29/16 10:11	AS	TAL SL
Total/NA	Analysis	9315		1	285901	12/30/16 11:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281415	11/29/16 10:56	AS	TAL SL
Total/NA	Analysis	9320		1	285757	12/29/16 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285935	12/30/16 14:46	RTM	TAL SL

Client Sample ID: BAW-4

Date Collected: 11/19/16 13:38

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281400	11/29/16 10:11	AS	TAL SL
Total/NA	Analysis	9315		1	285901	12/30/16 11:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281415	11/29/16 10:56	AS	TAL SL
Total/NA	Analysis	9320		1	285757	12/29/16 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285935	12/30/16 14:46	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: BAW-5

Date Collected: 11/19/16 15:12

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281400	11/29/16 10:11	AS	TAL SL
Total/NA	Analysis	9315		1	285901	12/30/16 11:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281415	11/29/16 10:56	AS	TAL SL
Total/NA	Analysis	9320		1	285757	12/29/16 14:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285935	12/30/16 14:46	RTM	TAL SL

Client Sample ID: BAW-7

Date Collected: 11/19/16 09:07

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281400	11/29/16 10:11	AS	TAL SL
Total/NA	Analysis	9315		1	285901	12/30/16 11:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281415	11/29/16 10:56	AS	TAL SL
Total/NA	Analysis	9320		1	285757	12/29/16 14:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285935	12/30/16 14:46	RTM	TAL SL

Client Sample ID: DUP-04

Date Collected: 11/19/16 08:07

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281400	11/29/16 10:11	AS	TAL SL
Total/NA	Analysis	9315		1	285901	12/30/16 11:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281415	11/29/16 10:56	AS	TAL SL
Total/NA	Analysis	9320		1	285757	12/29/16 14:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285935	12/30/16 14:46	RTM	TAL SL

Client Sample ID: EB-03

Date Collected: 11/19/16 15:25

Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281400	11/29/16 10:11	AS	TAL SL
Total/NA	Analysis	9315		1	285901	12/30/16 11:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281415	11/29/16 10:56	AS	TAL SL
Total/NA	Analysis	9320		1	285757	12/29/16 14:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285935	12/30/16 14:46	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 11/19/16 12:45
Date Received: 11/21/16 07:40

Lab Sample ID: 400-130417-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281400	11/29/16 10:11	AS	TAL SL
Total/NA	Analysis	9315		1	285901	12/30/16 11:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281415	11/29/16 10:56	AS	TAL SL
Total/NA	Analysis	9320		1	285757	12/29/16 14:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285935	12/30/16 14:46	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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Rad

Prep Batch: 281400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total/NA	Water	PrecSep-21	
400-130417-2	BAW-2	Total/NA	Water	PrecSep-21	
400-130417-3	BAW-3	Total/NA	Water	PrecSep-21	
400-130417-4	BAW-4	Total/NA	Water	PrecSep-21	
400-130417-5	BAW-5	Total/NA	Water	PrecSep-21	
400-130417-6	BAW-7	Total/NA	Water	PrecSep-21	
400-130417-7	DUP-04	Total/NA	Water	PrecSep-21	
400-130417-8	EB-03	Total/NA	Water	PrecSep-21	
400-130417-9	FB-03	Total/NA	Water	PrecSep-21	
MB 160-281400/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-281400/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-130400-A-2-A DU	Duplicate	Total/NA	Water	PrecSep-21	
400-130400-A-7-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 281415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130417-1	BAW-1	Total/NA	Water	PrecSep_0	
400-130417-2	BAW-2	Total/NA	Water	PrecSep_0	
400-130417-3	BAW-3	Total/NA	Water	PrecSep_0	
400-130417-4	BAW-4	Total/NA	Water	PrecSep_0	
400-130417-5	BAW-5	Total/NA	Water	PrecSep_0	
400-130417-6	BAW-7	Total/NA	Water	PrecSep_0	
400-130417-7	DUP-04	Total/NA	Water	PrecSep_0	
400-130417-8	EB-03	Total/NA	Water	PrecSep_0	
400-130417-9	FB-03	Total/NA	Water	PrecSep_0	
MB 160-281415/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-281415/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-130400-A-7-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-281400/1-A
Matrix: Water
Analysis Batch: 285871

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281400

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03680	U	0.156	0.156	1.00	0.305	pCi/L	11/29/16 10:11	12/30/16 11:13	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					11/29/16 10:11	12/30/16 11:13	1

Lab Sample ID: LCS 160-281400/2-A
Matrix: Water
Analysis Batch: 285901

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281400

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	14.59		1.74	1.00	0.331	pCi/L	131	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	84.6		40 - 110						

Lab Sample ID: 400-130400-A-2-A DU
Matrix: Water
Analysis Batch: 285901

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 281400

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.269	U	-0.02400	U	0.145	1.00	0.316	pCi/L	0.82	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	87.5		40 - 110							

Lab Sample ID: 400-130400-A-7-A DU
Matrix: Water
Analysis Batch: 285872

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 281400

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.294	U	-0.08292	U F	0.121	1.00	0.306	pCi/L	1.12	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	87.5		40 - 110							

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-281415/1-A
Matrix: Water
Analysis Batch: 285757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281415

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.03809	U	0.237	0.237	1.00	0.418	pCi/L	11/29/16 10:56	12/29/16 14:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					11/29/16 10:56	12/29/16 14:04	1
Y Carrier	89.7		40 - 110					11/29/16 10:56	12/29/16 14:04	1

Lab Sample ID: LCS 160-281415/2-A
Matrix: Water
Analysis Batch: 285757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281415

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.1	15.00		1.61	1.00	0.379	pCi/L	107	56 - 140
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	84.6		40 - 110						
Y Carrier	95.7		40 - 110						

Lab Sample ID: 400-130400-A-7-B DU
Matrix: Water
Analysis Batch: 285757

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 281415

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.183	U	0.1512	U	0.234	1.00	0.392	pCi/L	0.07	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	87.5		40 - 110							
Y Carrier	96.4		40 - 110							

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

Lab Sample ID: 400-130400-A-7 DU
Matrix: Water
Analysis Batch: 285935

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	0.478		0.06830	U	0.263	5.00	0.392	pCi/L	0.71	

Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762 (Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Daniel Site: Bottom Ash		Lab P/N: Whitmire, Cheyenne R. E-Mail: cheyenne.whitmire@testamericainc.com Phone: 850 380 3458 Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #: Project #: 40006621 SSO W#:		Carrier Tracking No(s): Job #: 1-1 COC No: 400-55446-23825.2 Page: 1-1						
Analysis Requested Field Sampling Parameters Mercury 6020 - Sp,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,Pl,Mo,Se,Tl, 7470A - SM4500.CI.E - Chloride, SM4500.S04.E - Sulfate, 2540C - 9316, Ra226, 9320, Ra228, Ra228Ra228, GFC Perform MS/SD (Yes or No)		Field Filtered Sample (Yes or No)		Preservation Codes: 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) Other:						
Sample Identification Sample ID Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=other, A=air) Presentation Code		Total Number of Containers		Special Instructions/Note: 400-130417 COC						
BAW-1	11/19/16	1011	G	Water	X					
BAW-2	11/18/16	1058	G	Water	X					
BAW-3	11/19/16	1207	G	Water	X					
BAW-4	11/19/16	1338	G	Water	X					
BAW-5	11/19/16	1512	G	Water	X					
BAW-7	11/19/16	0907	G	Water	X					
DUP-04	11/19/16	0907	G	water	X					
EB-03	11/19/16	1525	G	water	X					
FB-03	11/19/16	1345	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)		Method of Shipment:		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:		Date:		Method of Shipment:						
Relinquished by:		Date/Time: 11/21/16 0740 Company: RDH		Date/Time: 11/21/16 0740 Company: JAC						
Relinquished by:		Date/Time:		Date/Time:						
Relinquished by:		Date/Time:		Date/Time:						
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.0, 0.0 - FAS						



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130417-2

SDG Number: Bottom Ash

Login Number: 130417

List Number: 1

Creator: Hughes, Nicholas T

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	0.0°C, 0.0°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 <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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

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	12-31-16
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	12-31-17
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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-130417-2
SDG: Bottom Ash

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

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: 400-132810-1

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

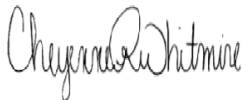
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

2/28/2017 5:48:06 PM

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

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Job ID: 400-132810-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-132810-1

General Chemistry

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 339607 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within acceptance limits.

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Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Lab Sample ID: 400-132810-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.036		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00088	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chloride	5.8		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.04				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-2

Lab Sample ID: 400-132810-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.87		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00049	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.4		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.04				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-3

Lab Sample ID: 400-132810-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00048	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	1.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0046		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	8.4		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.95				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-4

Lab Sample ID: 400-132810-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0096		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.027		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.7		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	2.3	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.22				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-5

Lab Sample ID: 400-132810-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0016		0.0013	0.00046	mg/L	5		6020	Total
Barium	0.045		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Boron	0.19		0.050	0.021	mg/L	5		6020	Recoverable Total
Calcium	17		0.25	0.13	mg/L	5		6020	Recoverable Total
Lithium	0.20		0.0050	0.0032	mg/L	5		6020	Recoverable Total
Molybdenum	0.0010	J	0.015	0.00085	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	68		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	8.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.050	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	3.2	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.47				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-7

Lab Sample ID: 400-132810-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total
Calcium	0.66		0.25	0.13	mg/L	5		6020	Recoverable Total
Cobalt	0.00091	J	0.0025	0.00040	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.86				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-132810-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total
Calcium	1.3		0.25	0.13	mg/L	5		6020	Recoverable Total
Cobalt	0.00089	J	0.0025	0.00040	mg/L	5		6020	Recoverable Total
Mercury	0.000074	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.8		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: FB-02

Lab Sample ID: 400-132810-8

No Detections.

Client Sample ID: EB-02

Lab Sample ID: 400-132810-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000088	J	0.00020	0.000070	mg/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
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
Field Sampling	Field Sampling	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132810-1	BAW-1	Water	01/17/17 14:58	01/18/17 16:36
400-132810-2	BAW-2	Water	01/17/17 14:34	01/18/17 16:36
400-132810-3	BAW-3	Water	01/17/17 15:16	01/18/17 16:36
400-132810-4	BAW-4	Water	01/18/17 07:45	01/18/17 16:36
400-132810-5	BAW-5	Water	01/18/17 08:26	01/18/17 16:36
400-132810-6	BAW-7	Water	01/17/17 15:54	01/18/17 16:36
400-132810-7	DUP-02	Water	01/17/17 13:58	01/18/17 16:36
400-132810-8	FB-02	Water	01/18/17 07:30	01/18/17 16:36
400-132810-9	EB-02	Water	01/18/17 08:40	01/18/17 16:36

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 01/17/17 14:58
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 15:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 15:39	5
Barium	0.036		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 15:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:39	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 15:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:39	5
Calcium	1.4		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 15:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 15:39	5
Cobalt	0.00088	J	0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 15:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 15:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 15:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 15:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 15:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 15:39	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 14:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/21/17 14:05	1
Chloride	5.8		2.0	0.60	mg/L			01/20/17 09:49	1
Fluoride	<0.032		0.10	0.032	mg/L			01/26/17 19:29	1
Sulfate	<1.4		5.0	1.4	mg/L			01/24/17 11:14	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.04				SU			01/17/17 14:58	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 01/17/17 14:34
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 15:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 15:44	5
Barium	0.029		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 15:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:44	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 15:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:44	5
Calcium	0.87		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 15:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 15:44	5
Cobalt	0.00049 J		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 15:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 15:44	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 15:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 15:44	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 15:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 15:44	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 14:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			01/19/17 12:49	1
Chloride	5.4		2.0	0.60	mg/L			01/20/17 09:49	1
Fluoride	<0.032		0.10	0.032	mg/L			01/26/17 19:32	1
Sulfate	<1.4		5.0	1.4	mg/L			01/24/17 11:14	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.04				SU			01/17/17 14:34	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 01/17/17 15:16
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 15:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 15:53	5
Barium	0.029		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 15:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:53	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 15:53	5
Cadmium	0.00048 J		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:53	5
Calcium	1.2		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 15:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 15:53	5
Cobalt	0.0046		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 15:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 15:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 15:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 15:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 15:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 15:53	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			01/19/17 12:49	1
Chloride	8.4		2.0	0.60	mg/L			01/20/17 09:49	1
Fluoride	<0.032		0.10	0.032	mg/L			01/26/17 19:35	1
Sulfate	<1.4		5.0	1.4	mg/L			01/24/17 11:14	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.95				SU			01/17/17 15:16	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 01/18/17 07:45
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 15:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 15:57	5
Barium	0.0096		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 15:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:57	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 15:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:57	5
Calcium	3.1		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 15:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 15:57	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 15:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 15:57	5
Lithium	0.027		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 15:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 15:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 15:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 15:57	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			01/19/17 12:49	1
Chloride	6.7		2.0	0.60	mg/L			01/20/17 09:49	1
Fluoride	<0.032		0.10	0.032	mg/L			01/26/17 19:37	1
Sulfate	2.3	J	5.0	1.4	mg/L			01/24/17 11:14	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.22				SU			01/18/17 07:45	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 01/18/17 08:26
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 16:02	5
Arsenic	0.0016		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 16:02	5
Barium	0.045		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 16:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:02	5
Boron	0.19		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 16:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:02	5
Calcium	17		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 16:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 16:02	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 16:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 16:02	5
Lithium	0.20		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 16:02	5
Molybdenum	0.0010	J	0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 16:02	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 16:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 16:02	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 14:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	68		5.0	3.4	mg/L			01/19/17 12:49	1
Chloride	8.5		2.0	0.60	mg/L			01/20/17 12:06	1
Fluoride	0.050	J	0.10	0.032	mg/L			01/31/17 15:52	1
Sulfate	3.2	J	5.0	1.4	mg/L			01/24/17 11:14	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.47				SU			01/18/17 08:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 01/17/17 15:54
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 16:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 16:06	5
Barium	0.014		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 16:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:06	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 16:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:06	5
Calcium	0.66		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 16:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 16:06	5
Cobalt	0.00091	J	0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 16:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 16:06	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 16:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 16:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 16:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 16:06	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 14:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			01/21/17 14:05	1
Chloride	5.9		2.0	0.60	mg/L			01/20/17 12:06	1
Fluoride	<0.032		0.10	0.032	mg/L			01/31/17 15:58	1
Sulfate	<1.4		5.0	1.4	mg/L			01/24/17 11:14	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.86				SU			01/17/17 15:54	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: DUP-02
Date Collected: 01/17/17 13:58
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-7
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 16:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 16:11	5
Barium	0.037		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 16:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:11	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 16:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:11	5
Calcium	1.3		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 16:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 16:11	5
Cobalt	0.00089	J	0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 16:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 16:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 16:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 16:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 16:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 16:11	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000074	J	0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 14:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			01/19/17 12:49	1
Chloride	5.8		2.0	0.60	mg/L			01/20/17 12:06	1
Fluoride	<0.032		0.10	0.032	mg/L			01/31/17 16:02	1
Sulfate	<1.4		5.0	1.4	mg/L			01/25/17 09:44	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: FB-02
Date Collected: 01/18/17 07:30
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-8
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 16:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 16:38	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 16:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:38	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 16:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:38	5
Calcium	<0.13		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 16:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 16:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 16:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 16:38	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 16:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 16:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 16:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 16:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 14:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/19/17 12:49	1
Chloride	<0.60		2.0	0.60	mg/L			01/20/17 12:06	1
Fluoride	<0.032		0.10	0.032	mg/L			01/31/17 16:04	1
Sulfate	<1.4		5.0	1.4	mg/L			01/25/17 09:44	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: EB-02
Date Collected: 01/18/17 08:40
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-9
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 16:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 16:47	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 16:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:47	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 16:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 16:47	5
Calcium	<0.13		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 16:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 16:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 16:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 16:47	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 16:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 16:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 16:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 16:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000088	J	0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 14:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/19/17 12:49	1
Chloride	<0.60		2.0	0.60	mg/L			01/20/17 12:06	1
Fluoride	<0.032		0.10	0.032	mg/L			01/31/17 16:08	1
Sulfate	<1.4		5.0	1.4	mg/L			01/24/17 11:14	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Qualifiers

Metals

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.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 01/17/17 14:58

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 15:39	RJB	TAL PEN
Total/NA	Prep	7470A			339200	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 14:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	339235	01/20/17 09:49	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	339980	01/26/17 19:29	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	339607	01/24/17 11:14	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	343304	01/17/17 14:58	BWS	TAL PEN

Client Sample ID: BAW-2

Date Collected: 01/17/17 14:34

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 15:44	RJB	TAL PEN
Total/NA	Prep	7470A			339200	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 14:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339088	01/19/17 12:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	339235	01/20/17 09:49	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	339980	01/26/17 19:32	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	339607	01/24/17 11:14	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	343304	01/17/17 14:34	BWS	TAL PEN

Client Sample ID: BAW-3

Date Collected: 01/17/17 15:16

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 15:53	RJB	TAL PEN
Total/NA	Prep	7470A			339200	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 14:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339088	01/19/17 12:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	339235	01/20/17 09:49	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	339980	01/26/17 19:35	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	339607	01/24/17 11:14	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	343304	01/17/17 15:16	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: BAW-4

Date Collected: 01/18/17 07:45

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 15:57	RJB	TAL PEN
Total/NA	Prep	7470A			339200	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 14:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339088	01/19/17 12:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	339235	01/20/17 09:49	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	339980	01/26/17 19:37	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	339607	01/24/17 11:14	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	343304	01/18/17 07:45	BWS	TAL PEN

Client Sample ID: BAW-5

Date Collected: 01/18/17 08:26

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 16:02	RJB	TAL PEN
Total/NA	Prep	7470A			339200	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 14:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339088	01/19/17 12:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	339235	01/20/17 12:06	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	340526	01/31/17 15:52	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	339607	01/24/17 11:14	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	343304	01/18/17 08:26	BWS	TAL PEN

Client Sample ID: BAW-7

Date Collected: 01/17/17 15:54

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 16:06	RJB	TAL PEN
Total/NA	Prep	7470A			339200	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 14:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	339235	01/20/17 12:06	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	340526	01/31/17 15:58	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	339607	01/24/17 11:14	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	343304	01/17/17 15:54	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Client Sample ID: DUP-02

Lab Sample ID: 400-132810-7

Date Collected: 01/17/17 13:58

Matrix: Water

Date Received: 01/18/17 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 16:11	RJB	TAL PEN
Total/NA	Prep	7470A			339200	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 14:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339088	01/19/17 12:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	339235	01/20/17 12:06	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	340526	01/31/17 16:02	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	339729	01/25/17 09:44	BJB	TAL PEN

Client Sample ID: FB-02

Lab Sample ID: 400-132810-8

Date Collected: 01/18/17 07:30

Matrix: Water

Date Received: 01/18/17 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 16:38	RJB	TAL PEN
Total/NA	Prep	7470A			339200	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 14:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339088	01/19/17 12:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	339235	01/20/17 12:06	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	340526	01/31/17 16:04	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	339729	01/25/17 09:44	BJB	TAL PEN

Client Sample ID: EB-02

Lab Sample ID: 400-132810-9

Date Collected: 01/18/17 08:40

Matrix: Water

Date Received: 01/18/17 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 16:47	RJB	TAL PEN
Total/NA	Prep	7470A			339200	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 14:44	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339088	01/19/17 12:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	339235	01/20/17 12:06	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	340526	01/31/17 16:08	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	339607	01/24/17 11:14	BJB	TAL PEN

Laboratory References:

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

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Metals

Prep Batch: 339178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total Recoverable	Water	3005A	
400-132810-2	BAW-2	Total Recoverable	Water	3005A	
400-132810-3	BAW-3	Total Recoverable	Water	3005A	
400-132810-4	BAW-4	Total Recoverable	Water	3005A	
400-132810-5	BAW-5	Total Recoverable	Water	3005A	
400-132810-6	BAW-7	Total Recoverable	Water	3005A	
400-132810-7	DUP-02	Total Recoverable	Water	3005A	
400-132810-8	FB-02	Total Recoverable	Water	3005A	
400-132810-9	EB-02	Total Recoverable	Water	3005A	
MB 400-339178/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339178/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-132749-D-6-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-132749-D-6-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 339200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total/NA	Water	7470A	
400-132810-2	BAW-2	Total/NA	Water	7470A	
400-132810-3	BAW-3	Total/NA	Water	7470A	
400-132810-4	BAW-4	Total/NA	Water	7470A	
400-132810-5	BAW-5	Total/NA	Water	7470A	
400-132810-6	BAW-7	Total/NA	Water	7470A	
400-132810-7	DUP-02	Total/NA	Water	7470A	
400-132810-8	FB-02	Total/NA	Water	7470A	
400-132810-9	EB-02	Total/NA	Water	7470A	
MB 400-339200/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-339200/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-132827-V-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-132827-V-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 339484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total/NA	Water	7470A	339200
400-132810-2	BAW-2	Total/NA	Water	7470A	339200
400-132810-3	BAW-3	Total/NA	Water	7470A	339200
400-132810-4	BAW-4	Total/NA	Water	7470A	339200
400-132810-5	BAW-5	Total/NA	Water	7470A	339200
400-132810-6	BAW-7	Total/NA	Water	7470A	339200
400-132810-7	DUP-02	Total/NA	Water	7470A	339200
400-132810-8	FB-02	Total/NA	Water	7470A	339200
400-132810-9	EB-02	Total/NA	Water	7470A	339200
MB 400-339200/14-A	Method Blank	Total/NA	Water	7470A	339200
LCS 400-339200/15-A	Lab Control Sample	Total/NA	Water	7470A	339200
400-132827-V-1-B MS	Matrix Spike	Total/NA	Water	7470A	339200
400-132827-V-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	339200

Analysis Batch: 339677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total Recoverable	Water	6020	339178
400-132810-2	BAW-2	Total Recoverable	Water	6020	339178
400-132810-3	BAW-3	Total Recoverable	Water	6020	339178

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Metals (Continued)

Analysis Batch: 339677 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-4	BAW-4	Total Recoverable	Water	6020	339178
400-132810-5	BAW-5	Total Recoverable	Water	6020	339178
400-132810-6	BAW-7	Total Recoverable	Water	6020	339178
400-132810-7	DUP-02	Total Recoverable	Water	6020	339178
400-132810-8	FB-02	Total Recoverable	Water	6020	339178
400-132810-9	EB-02	Total Recoverable	Water	6020	339178
MB 400-339178/1-A ^5	Method Blank	Total Recoverable	Water	6020	339178
LCS 400-339178/2-A	Lab Control Sample	Total Recoverable	Water	6020	339178
400-132749-D-6-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	339178
400-132749-D-6-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	339178

General Chemistry

Analysis Batch: 339088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-2	BAW-2	Total/NA	Water	SM 2540C	
400-132810-3	BAW-3	Total/NA	Water	SM 2540C	
400-132810-4	BAW-4	Total/NA	Water	SM 2540C	
400-132810-5	BAW-5	Total/NA	Water	SM 2540C	
400-132810-7	DUP-02	Total/NA	Water	SM 2540C	
400-132810-8	FB-02	Total/NA	Water	SM 2540C	
400-132810-9	EB-02	Total/NA	Water	SM 2540C	
MB 400-339088/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-339088/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132733-A-12 DU	Duplicate	Total/NA	Water	SM 2540C	
400-132733-A-13 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 339235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total/NA	Water	SM 4500 CI- E	
400-132810-2	BAW-2	Total/NA	Water	SM 4500 CI- E	
400-132810-3	BAW-3	Total/NA	Water	SM 4500 CI- E	
400-132810-4	BAW-4	Total/NA	Water	SM 4500 CI- E	
400-132810-5	BAW-5	Total/NA	Water	SM 4500 CI- E	
400-132810-6	BAW-7	Total/NA	Water	SM 4500 CI- E	
400-132810-7	DUP-02	Total/NA	Water	SM 4500 CI- E	
400-132810-8	FB-02	Total/NA	Water	SM 4500 CI- E	
400-132810-9	EB-02	Total/NA	Water	SM 4500 CI- E	
MB 400-339235/6	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-339235/7	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-339235/3	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-132733-A-7 MS	Matrix Spike	Total/NA	Water	SM 4500 CI- E	
400-132733-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 339296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total/NA	Water	SM 2540C	
400-132810-6	BAW-7	Total/NA	Water	SM 2540C	
MB 400-339296/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-339296/2	Lab Control Sample	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 339296 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1 DU	BAW-1	Total/NA	Water	SM 2540C	

Analysis Batch: 339607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-132810-2	BAW-2	Total/NA	Water	SM 4500 SO4 E	
400-132810-3	BAW-3	Total/NA	Water	SM 4500 SO4 E	
400-132810-4	BAW-4	Total/NA	Water	SM 4500 SO4 E	
400-132810-5	BAW-5	Total/NA	Water	SM 4500 SO4 E	
400-132810-6	BAW-7	Total/NA	Water	SM 4500 SO4 E	
400-132810-9	EB-02	Total/NA	Water	SM 4500 SO4 E	
MB 400-339607/8	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-339607/9	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-339607/5	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-132733-A-8 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-132733-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 339729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-7	DUP-02	Total/NA	Water	SM 4500 SO4 E	
400-132810-8	FB-02	Total/NA	Water	SM 4500 SO4 E	
MB 400-339729/8	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-339729/9	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-339729/5	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-132733-A-21 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-132733-A-21 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 339980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total/NA	Water	SM 4500 F C	
400-132810-2	BAW-2	Total/NA	Water	SM 4500 F C	
400-132810-3	BAW-3	Total/NA	Water	SM 4500 F C	
400-132810-4	BAW-4	Total/NA	Water	SM 4500 F C	
MB 400-339980/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-339980/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-132679-A-5 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-132679-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-132733-A-7 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 340526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-5	BAW-5	Total/NA	Water	SM 4500 F C	
400-132810-6	BAW-7	Total/NA	Water	SM 4500 F C	
400-132810-7	DUP-02	Total/NA	Water	SM 4500 F C	
400-132810-8	FB-02	Total/NA	Water	SM 4500 F C	
400-132810-9	EB-02	Total/NA	Water	SM 4500 F C	
MB 400-340526/2	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-340526/3	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-132810-5 MS	BAW-5	Total/NA	Water	SM 4500 F C	
400-132810-5 MSD	BAW-5	Total/NA	Water	SM 4500 F C	
400-132733-A-17 DU	Duplicate	Total/NA	Water	SM 4500 F C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Field Service / Mobile Lab

Analysis Batch: 343304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total/NA	Water	Field Sampling	
400-132810-2	BAW-2	Total/NA	Water	Field Sampling	
400-132810-3	BAW-3	Total/NA	Water	Field Sampling	
400-132810-4	BAW-4	Total/NA	Water	Field Sampling	
400-132810-5	BAW-5	Total/NA	Water	Field Sampling	
400-132810-6	BAW-7	Total/NA	Water	Field Sampling	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-339178/1-A ^5
Matrix: Water
Analysis Batch: 339677

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339178

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 13:42	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 13:42	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 13:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 13:42	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 13:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 13:42	5
Calcium	<0.13		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 13:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 13:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 13:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 13:42	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 13:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 13:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 13:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 13:42	5

Lab Sample ID: LCS 400-339178/2-A
Matrix: Water
Analysis Batch: 339677

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339178

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0524		mg/L		105	80 - 120
Arsenic	0.0500	0.0506		mg/L		101	80 - 120
Barium	0.0500	0.0519		mg/L		104	80 - 120
Beryllium	0.0500	0.0550		mg/L		110	80 - 120
Boron	0.100	0.100		mg/L		100	80 - 120
Cadmium	0.0500	0.0510		mg/L		102	80 - 120
Calcium	5.00	4.82		mg/L		96	80 - 120
Chromium	0.0500	0.0497		mg/L		99	80 - 120
Cobalt	0.0500	0.0479		mg/L		96	80 - 120
Lead	0.0500	0.0507		mg/L		101	80 - 120
Lithium	0.0500	0.0524		mg/L		105	80 - 120
Molybdenum	0.100	0.102		mg/L		102	80 - 120
Selenium	0.0500	0.0496		mg/L		99	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

Lab Sample ID: 400-132749-D-6-B MS ^5
Matrix: Water
Analysis Batch: 339677

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 339178

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0537		mg/L		107	75 - 125
Arsenic	0.060		0.0500	0.112		mg/L		104	75 - 125
Barium	0.039		0.0500	0.0904		mg/L		103	75 - 125
Beryllium	<0.00034		0.0500	0.0532		mg/L		106	75 - 125
Boron	<0.021		0.100	0.118		mg/L		118	75 - 125
Cadmium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125
Calcium	4.7		5.00	9.56		mg/L		98	75 - 125
Chromium	<0.0011		0.0500	0.0499		mg/L		100	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-132749-D-6-B MS ^5
Matrix: Water
Analysis Batch: 339677

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 339178

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	<0.00040		0.0500	0.0481		mg/L		96	75 - 125
Lead	0.00035	J	0.0500	0.0513		mg/L		103	75 - 125
Lithium	<0.0032		0.0500	0.0498		mg/L		100	75 - 125
Molybdenum	<0.00085		0.100	0.101		mg/L		101	75 - 125
Selenium	<0.00024		0.0500	0.0490		mg/L		98	75 - 125
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125

Lab Sample ID: 400-132749-D-6-C MSD ^5
Matrix: Water
Analysis Batch: 339677

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 339178

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0524		mg/L		105	75 - 125	2	20
Arsenic	0.060		0.0500	0.113		mg/L		105	75 - 125	0	20
Barium	0.039		0.0500	0.0914		mg/L		105	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0538		mg/L		108	75 - 125	1	20
Boron	<0.021		0.100	0.114		mg/L		114	75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0507		mg/L		101	75 - 125	2	20
Calcium	4.7		5.00	9.57		mg/L		98	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0504		mg/L		101	75 - 125	1	20
Cobalt	<0.00040		0.0500	0.0488		mg/L		98	75 - 125	1	20
Lead	0.00035	J	0.0500	0.0519		mg/L		104	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0513		mg/L		103	75 - 125	3	20
Molybdenum	<0.00085		0.100	0.101		mg/L		101	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0492		mg/L		98	75 - 125	0	20
Thallium	<0.000085		0.0100	0.0105		mg/L		105	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-339200/14-A
Matrix: Water
Analysis Batch: 339484

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339200

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 13:53	1

Lab Sample ID: LCS 400-339200/15-A
Matrix: Water
Analysis Batch: 339484

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339200

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00109		mg/L		108	80 - 120

Lab Sample ID: 400-132827-V-1-B MS
Matrix: Water
Analysis Batch: 339484

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 339200

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00199		mg/L		99	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Lab Sample ID: 400-132827-V-1-C MSD
Matrix: Water
Analysis Batch: 339484

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 339200

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00192		mg/L		95	80 - 120	4	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-339088/1
Matrix: Water
Analysis Batch: 339088

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/19/17 12:49	1

Lab Sample ID: LCS 400-339088/2
Matrix: Water
Analysis Batch: 339088

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	278		mg/L		95	78 - 122

Lab Sample ID: 400-132733-A-12 DU
Matrix: Water
Analysis Batch: 339088

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	<3.4		<3.4		mg/L		NC	5

Lab Sample ID: 400-132733-A-13 DU
Matrix: Water
Analysis Batch: 339088

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	20		20.0		mg/L		0	5

Lab Sample ID: MB 400-339296/1
Matrix: Water
Analysis Batch: 339296

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/21/17 14:05	1

Lab Sample ID: LCS 400-339296/2
Matrix: Water
Analysis Batch: 339296

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	254		mg/L		87	78 - 122

Lab Sample ID: 400-132810-1 DU
Matrix: Water
Analysis Batch: 339296

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	<3.4		<3.4		mg/L		NC	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
 SDG: Bottom Ash

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-339235/6
Matrix: Water
Analysis Batch: 339235

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			01/20/17 08:40	1

Lab Sample ID: LCS 400-339235/7
Matrix: Water
Analysis Batch: 339235

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 400-339235/3
Matrix: Water
Analysis Batch: 339235

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	2.12		mg/L		106	50 - 150

Lab Sample ID: 400-132733-A-7 MS
Matrix: Water
Analysis Batch: 339235

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	7.2		10.0	18.6		mg/L		114	73 - 120

Lab Sample ID: 400-132733-A-7 MSD
Matrix: Water
Analysis Batch: 339235

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	7.2		10.0	18.1		mg/L		109	73 - 120	3	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-339980/3
Matrix: Water
Analysis Batch: 339980

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			01/26/17 18:07	1

Lab Sample ID: LCS 400-339980/4
Matrix: Water
Analysis Batch: 339980

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	4.13		mg/L		103	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-132679-A-5 MS
Matrix: Water
Analysis Batch: 339980

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	1.0		1.00	2.08		mg/L		106	75 - 125

Lab Sample ID: 400-132679-A-5 MSD
Matrix: Water
Analysis Batch: 339980

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	1.0		1.00	2.04		mg/L		102	75 - 125	2	4

Lab Sample ID: 400-132733-A-7 DU
Matrix: Water
Analysis Batch: 339980

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

Lab Sample ID: MB 400-340526/2
Matrix: Water
Analysis Batch: 340526

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			01/31/17 15:43	1

Lab Sample ID: LCS 400-340526/3
Matrix: Water
Analysis Batch: 340526

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	3.90		mg/L		98	90 - 110

Lab Sample ID: 400-132810-5 MS
Matrix: Water
Analysis Batch: 340526

Client Sample ID: BAW-5
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: 400-132810-5 MSD
Matrix: Water
Analysis Batch: 340526

Client Sample ID: BAW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.050	J	1.00	1.04		mg/L		99	75 - 125	4	4

Lab Sample ID: 400-132733-A-17 DU
Matrix: Water
Analysis Batch: 340526

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-339607/8
Matrix: Water
Analysis Batch: 339607

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			01/24/17 08:46	1

Lab Sample ID: LCS 400-339607/9
Matrix: Water
Analysis Batch: 339607

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 400-339607/5
Matrix: Water
Analysis Batch: 339607

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	4.67	J	mg/L		93	50 - 150

Lab Sample ID: 400-132733-A-8 MS
Matrix: Water
Analysis Batch: 339607

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4	F1	10.0	<1.4	F1	mg/L		0	77 - 128

Lab Sample ID: 400-132733-A-8 MSD
Matrix: Water
Analysis Batch: 339607

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	<1.4	F1	10.0	<1.4	F1	mg/L		0	77 - 128	NC	5

Lab Sample ID: MB 400-339729/8
Matrix: Water
Analysis Batch: 339729

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			01/25/17 08:28	1

Lab Sample ID: LCS 400-339729/9
Matrix: Water
Analysis Batch: 339729

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		99	90 - 110

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
 SDG: Bottom Ash

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-339729/5
Matrix: Water
Analysis Batch: 339729

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	4.39	J	mg/L		88	50 - 150

Lab Sample ID: 400-132733-A-21 MS
Matrix: Water
Analysis Batch: 339729

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	3.8	J	10.0	14.5		mg/L		106	77 - 128

Lab Sample ID: 400-132733-A-21 MSD
Matrix: Water
Analysis Batch: 339729

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	3.8	J	10.0	14.4		mg/L		106	77 - 128	0	5

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132810-1

SDG Number: Bottom Ash

Login Number: 132810

List Number: 1

Creator: Hughes, Nicholas T

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	0.0°C, 0.0°C IR-6
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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-1
SDG: Bottom Ash

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

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: 400-132810-2

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

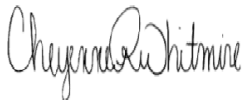
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

2/21/2017 11:51:55 AM

Cheyenne Whitmire, Project Manager II

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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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Job ID: 400-132810-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-132810-2

RAD

Method(s) PrecSep_0: Radium-228 Prep Batch 160-288937: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: BAW-1 (400-132810-1), BAW-2 (400-132810-2), BAW-3 (400-132810-3), BAW-4 (400-132810-4), BAW-5 (400-132810-5), BAW-7 (400-132810-6), DUP-02 (400-132810-7), FB-02 (400-132810-8) and EB-02 (400-132810-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-288937: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: BAW-1 (400-132810-1), BAW-2 (400-132810-2), BAW-3 (400-132810-3), BAW-4 (400-132810-4), BAW-5 (400-132810-5), BAW-7 (400-132810-6), DUP-02 (400-132810-7), FB-02 (400-132810-8) and EB-02 (400-132810-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.



Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132810-1	BAW-1	Water	01/17/17 14:58	01/18/17 16:36
400-132810-2	BAW-2	Water	01/17/17 14:34	01/18/17 16:36
400-132810-3	BAW-3	Water	01/17/17 15:16	01/18/17 16:36
400-132810-4	BAW-4	Water	01/18/17 07:45	01/18/17 16:36
400-132810-5	BAW-5	Water	01/18/17 08:26	01/18/17 16:36
400-132810-6	BAW-7	Water	01/17/17 15:54	01/18/17 16:36
400-132810-7	DUP-02	Water	01/17/17 13:58	01/18/17 16:36
400-132810-8	FB-02	Water	01/18/17 07:30	01/18/17 16:36
400-132810-9	EB-02	Water	01/18/17 08:40	01/18/17 16:36

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
 SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 01/17/17 14:58
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-1
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.325		0.206	0.208	1.00	0.268	pCi/L	01/24/17 09:08	02/16/17 16:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					01/24/17 09:08	02/16/17 16:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.288	U	0.303	0.304	1.00	0.495	pCi/L	01/24/17 09:30	02/15/17 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					01/24/17 09:30	02/15/17 17:52	1
Y Carrier	84.5		40 - 110					01/24/17 09:30	02/15/17 17:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.613		0.367	0.369	5.00	0.495	pCi/L		02/20/17 09:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 01/17/17 14:34
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-2
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.234	U	0.201	0.202	1.00	0.300	pCi/L	01/24/17 09:08	02/16/17 16:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					01/24/17 09:08	02/16/17 16:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.565		0.276	0.281	1.00	0.402	pCi/L	01/24/17 09:30	02/15/17 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.1		40 - 110					01/24/17 09:30	02/15/17 17:52	1
Y Carrier	86.0		40 - 110					01/24/17 09:30	02/15/17 17:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.799		0.342	0.346	5.00	0.402	pCi/L		02/20/17 09:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 01/17/17 15:16
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-3
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0634	U	0.157	0.157	1.00	0.293	pCi/L	01/24/17 09:08	02/16/17 16:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					01/24/17 09:08	02/16/17 16:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.348	U	0.279	0.281	1.00	0.441	pCi/L	01/24/17 09:30	02/15/17 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					01/24/17 09:30	02/15/17 17:52	1
Y Carrier	81.9		40 - 110					01/24/17 09:30	02/15/17 17:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.412	U	0.320	0.322	5.00	0.441	pCi/L		02/20/17 09:41	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
 SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 01/18/17 07:45
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-4
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0456	U	0.175	0.175	1.00	0.368	pCi/L	01/24/17 09:08	02/16/17 16:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.9		40 - 110					01/24/17 09:08	02/16/17 16:48	1

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	0.273	0.274	1.00	0.442	pCi/L	01/24/17 09:30	02/15/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.7		40 - 110					01/24/17 09:30	02/15/17 17:53	1
Y Carrier	84.9		40 - 110					01/24/17 09:30	02/15/17 17:53	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	0.235	U	0.324	0.325	5.00	0.442	pCi/L		02/20/17 09:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 01/18/17 08:26
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-5
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00413	U	0.184	0.184	1.00	0.366	pCi/L	01/24/17 09:08	02/16/17 16:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.9		40 - 110					01/24/17 09:08	02/16/17 16:48	1

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	0.270	0.272	1.00	0.435	pCi/L	01/24/17 09:30	02/15/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					01/24/17 09:30	02/15/17 17:53	1
Y Carrier	83.0		40 - 110					01/24/17 09:30	02/15/17 17:53	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	0.289	U	0.327	0.328	5.00	0.435	pCi/L		02/20/17 09:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 01/17/17 15:54
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-6
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0546	U	0.151	0.151	1.00	0.285	pCi/L	01/24/17 09:08	02/16/17 16:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					01/24/17 09:08	02/16/17 16:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0695	U	0.260	0.260	1.00	0.455	pCi/L	01/24/17 09:30	02/15/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.1		40 - 110					01/24/17 09:30	02/15/17 17:53	1
Y Carrier	83.7		40 - 110					01/24/17 09:30	02/15/17 17:53	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	0.124	U	0.301	0.301	5.00	0.455	pCi/L		02/20/17 09:41	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
 SDG: Bottom Ash

Client Sample ID: DUP-02
Date Collected: 01/17/17 13:58
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-7
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0360	U	0.183	0.183	1.00	0.350	pCi/L	01/24/17 09:08	02/16/17 16:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.9		40 - 110					01/24/17 09:08	02/16/17 16:48	1

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	0.295	0.296	1.00	0.485	pCi/L	01/24/17 09:30	02/15/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.6		40 - 110					01/24/17 09:30	02/15/17 17:53	1
Y Carrier	84.9		40 - 110					01/24/17 09:30	02/15/17 17:53	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	0.301	U	0.347	0.348	5.00	0.485	pCi/L		02/20/17 09:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Client Sample ID: FB-02
Date Collected: 01/18/17 07:30
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-8
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0108	U	0.157	0.157	1.00	0.328	pCi/L	01/24/17 09:08	02/16/17 16:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.6		40 - 110					01/24/17 09:08	02/16/17 16:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.390	U	0.344	0.346	1.00	0.554	pCi/L	01/24/17 09:30	02/15/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.4		40 - 110					01/24/17 09:30	02/15/17 17:53	1
Y Carrier	83.4		40 - 110					01/24/17 09:30	02/15/17 17:53	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	0.379	U	0.378	0.380	5.00	0.554	pCi/L		02/20/17 09:41	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
 SDG: Bottom Ash

Client Sample ID: EB-02
Date Collected: 01/18/17 08:40
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-9
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0145	U	0.130	0.130	1.00	0.268	pCi/L	01/24/17 09:08	02/16/17 18:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.1		40 - 110					01/24/17 09:08	02/16/17 18:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.294	U	0.307	0.308	1.00	0.501	pCi/L	01/24/17 09:30	02/15/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.8		40 - 110					01/24/17 09:30	02/15/17 17:53	1
Y Carrier	83.4		40 - 110					01/24/17 09:30	02/15/17 17:53	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	0.308	U	0.333	0.334	5.00	0.501	pCi/L		02/20/17 09:41	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 01/17/17 14:58

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288937	01/24/17 09:08	AS	TAL SL
Total/NA	Analysis	9315		1	292777	02/16/17 16:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289031	01/24/17 09:30	AS	TAL SL
Total/NA	Analysis	9320		1	292784	02/15/17 17:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: BAW-2

Date Collected: 01/17/17 14:34

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288937	01/24/17 09:08	AS	TAL SL
Total/NA	Analysis	9315		1	292777	02/16/17 16:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289031	01/24/17 09:30	AS	TAL SL
Total/NA	Analysis	9320		1	292784	02/15/17 17:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: BAW-3

Date Collected: 01/17/17 15:16

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288937	01/24/17 09:08	AS	TAL SL
Total/NA	Analysis	9315		1	292777	02/16/17 16:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289031	01/24/17 09:30	AS	TAL SL
Total/NA	Analysis	9320		1	292784	02/15/17 17:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: BAW-4

Date Collected: 01/18/17 07:45

Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288937	01/24/17 09:08	AS	TAL SL
Total/NA	Analysis	9315		1	292777	02/16/17 16:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289031	01/24/17 09:30	AS	TAL SL
Total/NA	Analysis	9320		1	292784	02/15/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Client Sample ID: BAW-5

Lab Sample ID: 400-132810-5

Date Collected: 01/18/17 08:26

Matrix: Water

Date Received: 01/18/17 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288937	01/24/17 09:08	AS	TAL SL
Total/NA	Analysis	9315		1	292777	02/16/17 16:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289031	01/24/17 09:30	AS	TAL SL
Total/NA	Analysis	9320		1	292784	02/15/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: BAW-7

Lab Sample ID: 400-132810-6

Date Collected: 01/17/17 15:54

Matrix: Water

Date Received: 01/18/17 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288937	01/24/17 09:08	AS	TAL SL
Total/NA	Analysis	9315		1	292777	02/16/17 16:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289031	01/24/17 09:30	AS	TAL SL
Total/NA	Analysis	9320		1	292784	02/15/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: DUP-02

Lab Sample ID: 400-132810-7

Date Collected: 01/17/17 13:58

Matrix: Water

Date Received: 01/18/17 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288937	01/24/17 09:08	AS	TAL SL
Total/NA	Analysis	9315		1	292777	02/16/17 16:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289031	01/24/17 09:30	AS	TAL SL
Total/NA	Analysis	9320		1	292784	02/15/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: FB-02

Lab Sample ID: 400-132810-8

Date Collected: 01/18/17 07:30

Matrix: Water

Date Received: 01/18/17 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288937	01/24/17 09:08	AS	TAL SL
Total/NA	Analysis	9315		1	292777	02/16/17 16:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289031	01/24/17 09:30	AS	TAL SL
Total/NA	Analysis	9320		1	292784	02/15/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Client Sample ID: EB-02
Date Collected: 01/18/17 08:40
Date Received: 01/18/17 16:36

Lab Sample ID: 400-132810-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288937	01/24/17 09:08	AS	TAL SL
Total/NA	Analysis	9315		1	292777	02/16/17 18:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289031	01/24/17 09:30	AS	TAL SL
Total/NA	Analysis	9320		1	292784	02/15/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Rad

Prep Batch: 288937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total/NA	Water	PrecSep-21	
400-132810-2	BAW-2	Total/NA	Water	PrecSep-21	
400-132810-3	BAW-3	Total/NA	Water	PrecSep-21	
400-132810-4	BAW-4	Total/NA	Water	PrecSep-21	
400-132810-5	BAW-5	Total/NA	Water	PrecSep-21	
400-132810-6	BAW-7	Total/NA	Water	PrecSep-21	
400-132810-7	DUP-02	Total/NA	Water	PrecSep-21	
400-132810-8	FB-02	Total/NA	Water	PrecSep-21	
400-132810-9	EB-02	Total/NA	Water	PrecSep-21	
MB 160-288937/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-288937/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-288937/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 289031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132810-1	BAW-1	Total/NA	Water	PrecSep_0	
400-132810-2	BAW-2	Total/NA	Water	PrecSep_0	
400-132810-3	BAW-3	Total/NA	Water	PrecSep_0	
400-132810-4	BAW-4	Total/NA	Water	PrecSep_0	
400-132810-5	BAW-5	Total/NA	Water	PrecSep_0	
400-132810-6	BAW-7	Total/NA	Water	PrecSep_0	
400-132810-7	DUP-02	Total/NA	Water	PrecSep_0	
400-132810-8	FB-02	Total/NA	Water	PrecSep_0	
400-132810-9	EB-02	Total/NA	Water	PrecSep_0	
MB 160-289031/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-289031/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-289031/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-288937/1-A
Matrix: Water
Analysis Batch: 292777

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288937

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02701	U	0.164	0.164	1.00	0.343	pCi/L	01/24/17 09:08	02/16/17 14:44	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.8		40 - 110					01/24/17 09:08	02/16/17 14:44	1

Lab Sample ID: LCS 160-288937/2-A
Matrix: Water
Analysis Batch: 292777

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288937

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.01	8.175		1.14	1.00	0.341	pCi/L	136	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	77.8		40 - 110						

Lab Sample ID: LCSD 160-288937/3-A
Matrix: Water
Analysis Batch: 292777

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 288937

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	6.01	7.802		1.11	1.00	0.386	pCi/L	130	68 - 137	0.17	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	78.3		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-289031/1-A
Matrix: Water
Analysis Batch: 292784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 289031

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1583	U	0.257	0.257	1.00	0.434	pCi/L	01/24/17 09:30	02/15/17 17:52	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110					01/24/17 09:30	02/15/17 17:52	1
Y Carrier	82.6		40 - 110					01/24/17 09:30	02/15/17 17:52	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

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

Lab Sample ID: LCS 160-289031/2-A
Matrix: Water
Analysis Batch: 292784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 289031

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.8	14.92		1.66	1.00	0.445	pCi/L	108	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	80.5		40 - 110
Y Carrier	80.4		40 - 110

Lab Sample ID: LCSD 160-289031/3-A
Matrix: Water
Analysis Batch: 292784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 289031

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.8	14.20		1.57	1.00	0.409	pCi/L	103	56 - 140	0.22	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	81.1		40 - 110
Y Carrier	86.0		40 - 110

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

Lab Sample ID: 400-132574-A-1 DU
Matrix: Water
Analysis Batch: 293353

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	5.02		5.677		0.851	5.00	0.518	pCi/L	0.40	

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

Sampler: **Brett Scales** Lab Pk: **Whitire, Cheyenne R**
 Phone: **850 380 3458** E-Mail: **cheyenne.whitire@testamericainc.com**
 Client Information
 Mr. Cale Sellers
 Company: Southern Company
 Address: PO BOX 2641 GSC8
 City: Birmingham
 State/Zip: AL, 35291
 Phone: 205-992-7762(Tel)
 PO #: SCS10328728
 WFO #: 377180
 Email: CBSELLER@SOUTHERNICO.COM
 Project Name: CCR Plant Daniel
 CCR Plant Daniel
 Site: Mississippi

Carrier Tracking No(s):
 COC No: 400-61561-24533.1
 Page: Page 1 of 1
 Job #:

Analysis Requested
 Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NeHSCl4
 F - MeOH
 G - Amshlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other:
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2OAS
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 X - EDA
 Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=oil, A=air, L=leachate)	4500 F, C - Florida	2540C - Total Dissolved Solids	6020, 7470A	SM4500 Cl, E, SM4500, S04 E	9315, P2226, 9320, R4228	Special Instructions/Note:
BAW-1	1/17/17	1458	G	Water	X	X	X	X	X	
BAW-2	1/17/17	1434		Water	X	X	X	X	X	
BAW-3	1/17/17	1516		Water	X	X	X	X	X	
BAW-4	1/18/17	0745		Water	X	X	X	X	X	
BAW-5	1/18/17	0826		Water	X	X	X	X	X	
BAW-7	1/17/17	1554		Water	X	X	X	X	X	
DUP-02	1/17/17	1358		W	X	X	X	X	X	
FB-02	1/18/17	0730		W	X	X	X	X	X	
EB-02	1/18/17	0840	G	W	X	X	X	X	X	

Special Instructions/OC Requirements:
 Return To Client Dispose By Lab Archive For _____ Months
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Special Instructions/OC Requirements:
 Method of Shipment:
 Date/Time: 1-18-17 1636
 Received by: **Carrie Piere**
 Company: **KPH em**
 Date/Time: 1/18/17 16:30
 Received by: **Carrie Piere**
 Company: **TAPEN**
 Date/Time: **0.0, 0.0°C**
 Received by: **FA-6**
 Company: **FA-6**
 Custody Seals Intact: Custody Seal No.:



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132810-2

SDG Number: Bottom Ash

Login Number: 132810

List Number: 1

Creator: Hughes, Nicholas T

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	0.0°C, 0.0°C IR-6
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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

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	12-30-17
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 *
North Dakota	State Program	8	R207	06-30-17

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-132810-2
SDG: Bottom Ash

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		P330-17-0028	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

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: 400-135536-1

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

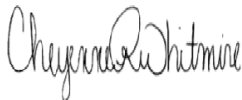
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

4/19/2017 2:35:48 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Job ID: 400-135536-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-135536-1

Metals

Method(s) 6020: The ICSAB for batch 347398 recovered higher than the acceptance limits for element: Chromium. All reported samples associated with this ICSAB were ND, therefore, re-analysis of samples was not performed.

Method(s) 6020: The CRI for analytical batch 347398 contained Chromium above the acceptance limit. All reported samples associated with this CRI are ND, therefore, re-analysis of samples was not performed.

Method(s) 6020: The native sample and post digestion spike (PDS) associated with preparation batch 346980 and analytical batch 347398 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Molybdenum in the PDS was above the instrument calibration range. The data has been reported and qualified.

Method(s) 6020: The native sample and post digestion spike (PDS) associated with preparation batch 347376 and analytical batch 348358 were performed at the same dilution. Due to the additional level of analyte present in the post digestion spike standard, the concentration of Molybdenum in the PDS was above the instrument calibration range. The data has been reported and qualified.

Method(s) 7470A: The method blank for prep batch 347049 contained Mercury above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed.

General Chemistry

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.

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Lab Sample ID: 400-135536-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.033		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.95		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	4.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.73				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-2

Lab Sample ID: 400-135536-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.74		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00057	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00013	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	16		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.8	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.66				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-3

Lab Sample ID: 400-135536-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.024		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00059	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	0.87		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0049		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00038	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Mercury	0.00013	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	28		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.8		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	2.3	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.66				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-4

Lab Sample ID: 400-135536-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00078	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.0093		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.024	J	0.050	0.021	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-4 (Continued)

Lab Sample ID: 400-135536-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	2.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.024		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.00013	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	6.0		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	3.2	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.01				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-5

Lab Sample ID: 400-135536-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0017		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.19		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	15		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.19		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	80		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	8.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.050	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	3.7	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.19				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-7

Lab Sample ID: 400-135536-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00052	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.65		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00098	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0038	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0021		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.1		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.9	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.66				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-03

Lab Sample ID: 400-135536-7

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: DUP-03 (Continued)

Lab Sample ID: 400-135536-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.63		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00095	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.2		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.9	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: EB-03

Lab Sample ID: 400-135536-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	15		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: FB-03

Lab Sample ID: 400-135536-9

No Detections.

Client Sample ID: DUP-04

Lab Sample ID: 400-135536-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.026		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.77		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00054	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	34		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.3		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.9	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
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
Field Sampling	Field Sampling	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-135536-1	BAW-1	Water	03/22/17 14:08	03/23/17 13:00
400-135536-2	BAW-2	Water	03/23/17 06:56	03/23/17 13:00
400-135536-3	BAW-3	Water	03/23/17 07:45	03/23/17 13:00
400-135536-4	BAW-4	Water	03/23/17 08:53	03/23/17 13:00
400-135536-5	BAW-5	Water	03/23/17 09:50	03/23/17 13:00
400-135536-6	BAW-7	Water	03/22/17 13:18	03/23/17 13:00
400-135536-7	DUP-03	Water	03/22/17 12:18	03/23/17 13:00
400-135536-8	EB-03	Water	03/23/17 09:00	03/23/17 13:00
400-135536-9	FB-03	Water	03/23/17 07:30	03/23/17 13:00
400-135536-10	DUP-04	Water	03/23/17 05:56	03/23/17 13:00

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- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 03/22/17 14:08
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/24/17 08:38	03/27/17 14:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/24/17 08:38	03/27/17 14:28	5
Barium	0.033		0.0025	0.00049	mg/L		03/24/17 08:38	03/27/17 14:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 14:28	5
Boron	<0.021		0.050	0.021	mg/L		03/24/17 08:38	03/27/17 14:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 14:28	5
Calcium	0.95		0.25	0.13	mg/L		03/24/17 08:38	03/27/17 14:28	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		03/24/17 08:38	03/27/17 14:28	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		03/24/17 08:38	03/27/17 14:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/24/17 08:38	03/27/17 14:28	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/24/17 08:38	03/27/17 14:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/24/17 08:38	03/27/17 14:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/24/17 08:38	03/27/17 14:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/24/17 08:38	03/27/17 14:28	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		03/24/17 14:42	03/28/17 13:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			03/28/17 16:21	1
Chloride	4.9		2.0	0.60	mg/L			04/04/17 14:49	1
Fluoride	<0.032		0.10	0.032	mg/L			04/06/17 16:40	1
Sulfate	<1.4		5.0	1.4	mg/L			04/13/17 08:43	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.73				SU			03/22/17 14:08	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 03/23/17 06:56
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/24/17 08:38	03/27/17 14:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/24/17 08:38	03/27/17 14:32	5
Barium	0.027		0.0025	0.00049	mg/L		03/24/17 08:38	03/27/17 14:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 14:32	5
Boron	<0.021		0.050	0.021	mg/L		03/24/17 08:38	03/27/17 14:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 14:32	5
Calcium	0.74		0.25	0.13	mg/L		03/24/17 08:38	03/27/17 14:32	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		03/24/17 08:38	03/27/17 14:32	5
Cobalt	0.00057	J	0.0025	0.00040	mg/L		03/24/17 08:38	03/27/17 14:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/24/17 08:38	03/27/17 14:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/24/17 08:38	03/27/17 14:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/24/17 08:38	03/27/17 14:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/24/17 08:38	03/27/17 14:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/24/17 08:38	03/27/17 14:32	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	J B	0.00020	0.000070	mg/L		03/24/17 14:42	03/28/17 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			03/29/17 15:03	1
Chloride	5.1		2.0	0.60	mg/L			04/05/17 08:41	1
Fluoride	<0.032		0.10	0.032	mg/L			04/06/17 16:53	1
Sulfate	1.8	J	5.0	1.4	mg/L			04/13/17 11:07	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.66				SU			03/23/17 06:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 03/23/17 07:45
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/24/17 08:38	03/27/17 14:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/24/17 08:38	03/27/17 14:37	5
Barium	0.024		0.0025	0.00049	mg/L		03/24/17 08:38	03/27/17 14:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 14:37	5
Boron	<0.021		0.050	0.021	mg/L		03/24/17 08:38	03/27/17 14:37	5
Cadmium	0.00059	J	0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 14:37	5
Calcium	0.87		0.25	0.13	mg/L		03/24/17 08:38	03/27/17 14:37	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		03/24/17 08:38	03/27/17 14:37	5
Cobalt	0.0049		0.0025	0.00040	mg/L		03/24/17 08:38	03/27/17 14:37	5
Lead	0.00038	J	0.0013	0.00035	mg/L		03/24/17 08:38	03/27/17 14:37	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/24/17 08:38	03/27/17 14:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/24/17 08:38	03/27/17 14:37	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/24/17 08:38	03/27/17 14:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/24/17 08:38	03/27/17 14:37	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	J B	0.00020	0.000070	mg/L		03/24/17 14:42	03/28/17 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	28		5.0	3.4	mg/L			03/29/17 15:03	1
Chloride	6.8		2.0	0.60	mg/L			04/05/17 08:41	1
Fluoride	<0.032		0.10	0.032	mg/L			04/06/17 16:55	1
Sulfate	2.3	J	5.0	1.4	mg/L			04/13/17 10:13	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.66				SU			03/23/17 07:45	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 03/23/17 08:53
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/24/17 08:38	03/27/17 14:41	5
Arsenic	0.00078	J	0.0013	0.00046	mg/L		03/24/17 08:38	03/27/17 14:41	5
Barium	0.0093		0.0025	0.00049	mg/L		03/24/17 08:38	03/27/17 14:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 14:41	5
Boron	0.024	J	0.050	0.021	mg/L		03/24/17 08:38	03/27/17 14:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 14:41	5
Calcium	2.8		0.25	0.13	mg/L		03/24/17 08:38	03/27/17 14:41	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		03/24/17 08:38	03/27/17 14:41	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		03/24/17 08:38	03/27/17 14:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/24/17 08:38	03/27/17 14:41	5
Lithium	0.024		0.0050	0.0032	mg/L		03/24/17 08:38	03/27/17 14:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/24/17 08:38	03/27/17 14:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/24/17 08:38	03/27/17 14:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/24/17 08:38	03/27/17 14:41	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	J B	0.00020	0.000070	mg/L		03/24/17 14:42	03/28/17 13:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			03/29/17 15:03	1
Chloride	6.0		2.0	0.60	mg/L			04/05/17 09:12	1
Fluoride	<0.032		0.10	0.032	mg/L			04/06/17 16:57	1
Sulfate	3.2	J	5.0	1.4	mg/L			04/13/17 10:13	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.01				SU			03/23/17 08:53	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 03/23/17 09:50
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/28/17 10:04	04/03/17 19:21	5
Arsenic	0.0017		0.0013	0.00046	mg/L		03/28/17 10:04	04/03/17 19:21	5
Barium	0.038		0.0025	0.00049	mg/L		03/28/17 10:04	04/03/17 19:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:21	5
Boron	0.19		0.050	0.021	mg/L		03/28/17 10:04	04/03/17 19:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:21	5
Calcium	15		0.25	0.13	mg/L		03/28/17 10:04	04/03/17 19:21	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/28/17 10:04	04/03/17 19:21	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/28/17 10:04	04/03/17 19:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/28/17 10:04	04/03/17 19:21	5
Lithium	0.19		0.0050	0.0032	mg/L		03/28/17 10:04	04/03/17 19:21	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/28/17 10:04	04/03/17 19:21	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/28/17 10:04	04/03/17 19:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/28/17 10:04	04/03/17 19:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/28/17 09:07	03/30/17 10:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	80		5.0	3.4	mg/L			03/29/17 15:03	1
Chloride	8.5		2.0	0.60	mg/L			04/05/17 09:12	1
Fluoride	0.050	J	0.10	0.032	mg/L			04/06/17 16:59	1
Sulfate	3.7	J	5.0	1.4	mg/L			04/13/17 11:44	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.19				SU			03/23/17 09:50	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 03/22/17 13:18
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/28/17 10:04	04/03/17 18:04	5
Arsenic	0.00052	J	0.0013	0.00046	mg/L		03/28/17 10:04	04/03/17 18:04	5
Barium	0.012		0.0025	0.00049	mg/L		03/28/17 10:04	04/03/17 18:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 18:04	5
Boron	<0.021		0.050	0.021	mg/L		03/28/17 10:04	04/03/17 18:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 18:04	5
Calcium	0.65		0.25	0.13	mg/L		03/28/17 10:04	04/03/17 18:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/28/17 10:04	04/03/17 18:04	5
Cobalt	0.00098	J	0.0025	0.00040	mg/L		03/28/17 10:04	04/03/17 18:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/28/17 10:04	04/03/17 18:04	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/28/17 10:04	04/03/17 18:04	5
Molybdenum	0.0038	J	0.015	0.00085	mg/L		03/28/17 10:04	04/03/17 18:04	5
Selenium	0.0021		0.0013	0.00024	mg/L		03/28/17 10:04	04/03/17 18:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/28/17 10:04	04/03/17 18:04	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/28/17 09:07	03/30/17 15:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			03/28/17 16:21	1
Chloride	5.1		2.0	0.60	mg/L			04/04/17 15:12	1
Fluoride	<0.032		0.10	0.032	mg/L			04/06/17 17:14	1
Sulfate	1.9	J	5.0	1.4	mg/L			04/13/17 08:43	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.66				SU			03/22/17 13:18	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: DUP-03
Date Collected: 03/22/17 12:18
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-7
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/28/17 10:04	04/03/17 19:25	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/28/17 10:04	04/03/17 19:25	5
Barium	0.012		0.0025	0.00049	mg/L		03/28/17 10:04	04/03/17 19:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:25	5
Boron	<0.021		0.050	0.021	mg/L		03/28/17 10:04	04/03/17 19:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:25	5
Calcium	0.63		0.25	0.13	mg/L		03/28/17 10:04	04/03/17 19:25	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/28/17 10:04	04/03/17 19:25	5
Cobalt	0.00095 J		0.0025	0.00040	mg/L		03/28/17 10:04	04/03/17 19:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/28/17 10:04	04/03/17 19:25	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/28/17 10:04	04/03/17 19:25	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/28/17 10:04	04/03/17 19:25	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/28/17 10:04	04/03/17 19:25	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/28/17 10:04	04/03/17 19:25	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/28/17 09:07	03/30/17 10:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			03/28/17 16:21	1
Chloride	5.2		2.0	0.60	mg/L			04/04/17 15:12	1
Fluoride	<0.032		0.10	0.032	mg/L			04/06/17 17:01	1
Sulfate	1.9 J		5.0	1.4	mg/L			04/13/17 08:43	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: EB-03
Date Collected: 03/23/17 09:00
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-8
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/28/17 10:04	04/03/17 19:48	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/28/17 10:04	04/03/17 19:48	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/28/17 10:04	04/03/17 19:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:48	5
Boron	<0.021		0.050	0.021	mg/L		03/28/17 10:04	04/03/17 19:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:48	5
Calcium	<0.13		0.25	0.13	mg/L		03/28/17 10:04	04/03/17 19:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/28/17 10:04	04/03/17 19:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/28/17 10:04	04/03/17 19:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/28/17 10:04	04/03/17 19:48	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/28/17 10:04	04/03/17 19:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/28/17 10:04	04/03/17 19:48	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/28/17 10:04	04/03/17 19:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/28/17 10:04	04/03/17 19:48	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/28/17 10:42	03/30/17 10:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/29/17 15:03	1
Chloride	<0.60		2.0	0.60	mg/L			04/05/17 09:13	1
Fluoride	<0.032		0.10	0.032	mg/L			04/06/17 17:04	1
Sulfate	15		5.0	1.4	mg/L			04/13/17 11:44	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 03/23/17 07:30
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-9
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/28/17 10:04	04/03/17 19:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/28/17 10:04	04/03/17 19:52	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/28/17 10:04	04/03/17 19:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:52	5
Boron	<0.021		0.050	0.021	mg/L		03/28/17 10:04	04/03/17 19:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:52	5
Calcium	<0.13		0.25	0.13	mg/L		03/28/17 10:04	04/03/17 19:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/28/17 10:04	04/03/17 19:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/28/17 10:04	04/03/17 19:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/28/17 10:04	04/03/17 19:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/28/17 10:04	04/03/17 19:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/28/17 10:04	04/03/17 19:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/28/17 10:04	04/03/17 19:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/28/17 10:04	04/03/17 19:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/28/17 09:07	03/30/17 10:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/29/17 15:03	1
Chloride	<0.60		2.0	0.60	mg/L			04/05/17 09:13	1
Fluoride	<0.032		0.10	0.032	mg/L			04/06/17 17:07	1
Sulfate	<1.4		5.0	1.4	mg/L			04/13/17 11:44	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: DUP-04

Date Collected: 03/23/17 05:56

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-10

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/28/17 10:04	04/03/17 19:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/28/17 10:04	04/03/17 19:57	5
Barium	0.026		0.0025	0.00049	mg/L		03/28/17 10:04	04/03/17 19:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:57	5
Boron	<0.021		0.050	0.021	mg/L		03/28/17 10:04	04/03/17 19:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 19:57	5
Calcium	0.77		0.25	0.13	mg/L		03/28/17 10:04	04/03/17 19:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/28/17 10:04	04/03/17 19:57	5
Cobalt	0.00054	J	0.0025	0.00040	mg/L		03/28/17 10:04	04/03/17 19:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/28/17 10:04	04/03/17 19:57	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/28/17 10:04	04/03/17 19:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/28/17 10:04	04/03/17 19:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/28/17 10:04	04/03/17 19:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/28/17 10:04	04/03/17 19:57	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/28/17 09:07	03/30/17 10:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34		5.0	3.4	mg/L			03/29/17 15:03	1
Chloride	5.3		2.0	0.60	mg/L			04/05/17 09:13	1
Fluoride	<0.032		0.10	0.032	mg/L			04/06/17 17:20	1
Sulfate	1.9	J	5.0	1.4	mg/L			04/13/17 11:44	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Qualifiers

Metals

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.
B	Compound was found in the blank and sample.

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.
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.
F1	MS and/or MSD Recovery 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 03/22/17 14:08

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			346980	03/24/17 08:38	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	347398	03/27/17 14:28	DRE	TAL PEN
Total/NA	Prep	7470A			347049	03/24/17 14:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347469	03/28/17 13:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347445	03/28/17 16:21	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348438	04/04/17 14:49	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 16:40	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349553	04/13/17 08:43	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	350180	03/22/17 14:08	BWS	TAL PEN

Client Sample ID: BAW-2

Date Collected: 03/23/17 06:56

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			346980	03/24/17 08:38	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	347398	03/27/17 14:32	DRE	TAL PEN
Total/NA	Prep	7470A			347049	03/24/17 14:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347469	03/28/17 13:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347582	03/29/17 15:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348485	04/05/17 08:41	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 16:53	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349600	04/13/17 11:07	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	350180	03/23/17 06:56	BWS	TAL PEN

Client Sample ID: BAW-3

Date Collected: 03/23/17 07:45

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			346980	03/24/17 08:38	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	347398	03/27/17 14:37	DRE	TAL PEN
Total/NA	Prep	7470A			347049	03/24/17 14:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347469	03/28/17 13:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347582	03/29/17 15:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348485	04/05/17 08:41	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 16:55	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349600	04/13/17 10:13	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	350180	03/23/17 07:45	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: BAW-4

Lab Sample ID: 400-135536-4

Date Collected: 03/23/17 08:53

Matrix: Water

Date Received: 03/23/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			346980	03/24/17 08:38	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	347398	03/27/17 14:41	DRE	TAL PEN
Total/NA	Prep	7470A			347049	03/24/17 14:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347469	03/28/17 13:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347582	03/29/17 15:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348485	04/05/17 09:12	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 16:57	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349600	04/13/17 10:13	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	350180	03/23/17 08:53	BWS	TAL PEN

Client Sample ID: BAW-5

Lab Sample ID: 400-135536-5

Date Collected: 03/23/17 09:50

Matrix: Water

Date Received: 03/23/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			347376	03/28/17 10:04	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	348358	04/03/17 19:21	DRE	TAL PEN
Total/NA	Prep	7470A			347360	03/28/17 09:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347810	03/30/17 10:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347582	03/29/17 15:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348485	04/05/17 09:12	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 16:59	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349600	04/13/17 11:44	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	350180	03/23/17 09:50	BWS	TAL PEN

Client Sample ID: BAW-7

Lab Sample ID: 400-135536-6

Date Collected: 03/22/17 13:18

Matrix: Water

Date Received: 03/23/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			347376	03/28/17 10:04	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	348358	04/03/17 18:04	DRE	TAL PEN
Total/NA	Prep	7470A			347360	03/28/17 09:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347817	03/30/17 15:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347445	03/28/17 16:21	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348438	04/04/17 15:12	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 17:14	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349553	04/13/17 08:43	BJB	TAL PEN
Total/NA	Analysis	Field Sampling		1	350180	03/22/17 13:18	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: DUP-03

Lab Sample ID: 400-135536-7

Date Collected: 03/22/17 12:18

Matrix: Water

Date Received: 03/23/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			347376	03/28/17 10:04	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	348358	04/03/17 19:25	DRE	TAL PEN
Total/NA	Prep	7470A			347360	03/28/17 09:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347810	03/30/17 10:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347445	03/28/17 16:21	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348438	04/04/17 15:12	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 17:01	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349553	04/13/17 08:43	BJB	TAL PEN

Client Sample ID: EB-03

Lab Sample ID: 400-135536-8

Date Collected: 03/23/17 09:00

Matrix: Water

Date Received: 03/23/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			347376	03/28/17 10:04	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	348358	04/03/17 19:48	DRE	TAL PEN
Total/NA	Prep	7470A			347360	03/28/17 10:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347810	03/30/17 10:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347582	03/29/17 15:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348485	04/05/17 09:13	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 17:04	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349600	04/13/17 11:44	BJB	TAL PEN

Client Sample ID: FB-03

Lab Sample ID: 400-135536-9

Date Collected: 03/23/17 07:30

Matrix: Water

Date Received: 03/23/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			347376	03/28/17 10:04	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	348358	04/03/17 19:52	DRE	TAL PEN
Total/NA	Prep	7470A			347360	03/28/17 09:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347810	03/30/17 10:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347582	03/29/17 15:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348485	04/05/17 09:13	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 17:07	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349600	04/13/17 11:44	BJB	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Client Sample ID: DUP-04

Lab Sample ID: 400-135536-10

Date Collected: 03/23/17 05:56

Matrix: Water

Date Received: 03/23/17 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			347376	03/28/17 10:04	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	348358	04/03/17 19:57	DRE	TAL PEN
Total/NA	Prep	7470A			347360	03/28/17 09:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	347810	03/30/17 10:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	347582	03/29/17 15:03	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	348485	04/05/17 09:13	BJB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	348790	04/06/17 17:20	SLT	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	349600	04/13/17 11:44	BJB	TAL PEN

Laboratory References:

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

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Metals

Prep Batch: 346980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total Recoverable	Water	3005A	
400-135536-2	BAW-2	Total Recoverable	Water	3005A	
400-135536-3	BAW-3	Total Recoverable	Water	3005A	
400-135536-4	BAW-4	Total Recoverable	Water	3005A	
MB 400-346980/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-346980/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-135429-C-10-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-135429-C-10-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 347049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total/NA	Water	7470A	
400-135536-2	BAW-2	Total/NA	Water	7470A	
400-135536-3	BAW-3	Total/NA	Water	7470A	
400-135536-4	BAW-4	Total/NA	Water	7470A	
MB 400-347049/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-347049/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-135448-H-12-B MS	Matrix Spike	Dissolved	Water	7470A	
400-135448-H-12-C MSD	Matrix Spike Duplicate	Dissolved	Water	7470A	

Prep Batch: 347360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-5	BAW-5	Total/NA	Water	7470A	
400-135536-6	BAW-7	Total/NA	Water	7470A	
400-135536-7	DUP-03	Total/NA	Water	7470A	
400-135536-8	EB-03	Total/NA	Water	7470A	
400-135536-9	FB-03	Total/NA	Water	7470A	
400-135536-10	DUP-04	Total/NA	Water	7470A	
MB 400-347360/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-347360/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-135536-5 MS	BAW-5	Total/NA	Water	7470A	
400-135536-5 MSD	BAW-5	Total/NA	Water	7470A	

Prep Batch: 347376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-5	BAW-5	Total Recoverable	Water	3005A	
400-135536-6	BAW-7	Total Recoverable	Water	3005A	
400-135536-7	DUP-03	Total Recoverable	Water	3005A	
400-135536-8	EB-03	Total Recoverable	Water	3005A	
400-135536-9	FB-03	Total Recoverable	Water	3005A	
400-135536-10	DUP-04	Total Recoverable	Water	3005A	
MB 400-347376/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-347376/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-135536-6 MS	BAW-7	Total Recoverable	Water	3005A	
400-135536-6 MSD	BAW-7	Total Recoverable	Water	3005A	

Analysis Batch: 347398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total Recoverable	Water	6020	346980
400-135536-2	BAW-2	Total Recoverable	Water	6020	346980
400-135536-3	BAW-3	Total Recoverable	Water	6020	346980

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Metals (Continued)

Analysis Batch: 347398 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-4	BAW-4	Total Recoverable	Water	6020	346980
MB 400-346980/1-A ^5	Method Blank	Total Recoverable	Water	6020	346980
LCS 400-346980/2-A	Lab Control Sample	Total Recoverable	Water	6020	346980
400-135429-C-10-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	346980
400-135429-C-10-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	346980

Analysis Batch: 347469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total/NA	Water	7470A	347049
400-135536-2	BAW-2	Total/NA	Water	7470A	347049
400-135536-3	BAW-3	Total/NA	Water	7470A	347049
400-135536-4	BAW-4	Total/NA	Water	7470A	347049
MB 400-347049/14-A	Method Blank	Total/NA	Water	7470A	347049
LCS 400-347049/15-A	Lab Control Sample	Total/NA	Water	7470A	347049
400-135448-H-12-B MS	Matrix Spike	Dissolved	Water	7470A	347049
400-135448-H-12-C MSD	Matrix Spike Duplicate	Dissolved	Water	7470A	347049

Analysis Batch: 347810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-5	BAW-5	Total/NA	Water	7470A	347360
400-135536-7	DUP-03	Total/NA	Water	7470A	347360
400-135536-8	EB-03	Total/NA	Water	7470A	347360
400-135536-9	FB-03	Total/NA	Water	7470A	347360
400-135536-10	DUP-04	Total/NA	Water	7470A	347360
MB 400-347360/14-A	Method Blank	Total/NA	Water	7470A	347360
LCS 400-347360/15-A	Lab Control Sample	Total/NA	Water	7470A	347360
400-135536-5 MS	BAW-5	Total/NA	Water	7470A	347360
400-135536-5 MSD	BAW-5	Total/NA	Water	7470A	347360

Analysis Batch: 347817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-6	BAW-7	Total/NA	Water	7470A	347360

Analysis Batch: 348358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-5	BAW-5	Total Recoverable	Water	6020	347376
400-135536-6	BAW-7	Total Recoverable	Water	6020	347376
400-135536-7	DUP-03	Total Recoverable	Water	6020	347376
400-135536-8	EB-03	Total Recoverable	Water	6020	347376
400-135536-9	FB-03	Total Recoverable	Water	6020	347376
400-135536-10	DUP-04	Total Recoverable	Water	6020	347376
MB 400-347376/1-A ^5	Method Blank	Total Recoverable	Water	6020	347376
LCS 400-347376/2-A	Lab Control Sample	Total Recoverable	Water	6020	347376
400-135536-6 MS	BAW-7	Total Recoverable	Water	6020	347376
400-135536-6 MSD	BAW-7	Total Recoverable	Water	6020	347376

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

General Chemistry

Analysis Batch: 347445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total/NA	Water	SM 2540C	
400-135536-6	BAW-7	Total/NA	Water	SM 2540C	
400-135536-7	DUP-03	Total/NA	Water	SM 2540C	
MB 400-347445/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-347445/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-135509-B-1 DU	Duplicate	Total/NA	Water	SM 2540C	
400-135639-A-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 347582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-2	BAW-2	Total/NA	Water	SM 2540C	
400-135536-3	BAW-3	Total/NA	Water	SM 2540C	
400-135536-4	BAW-4	Total/NA	Water	SM 2540C	
400-135536-5	BAW-5	Total/NA	Water	SM 2540C	
400-135536-8	EB-03	Total/NA	Water	SM 2540C	
400-135536-9	FB-03	Total/NA	Water	SM 2540C	
400-135536-10	DUP-04	Total/NA	Water	SM 2540C	
MB 400-347582/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-347582/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-135536-2 DU	BAW-2	Total/NA	Water	SM 2540C	

Analysis Batch: 348438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total/NA	Water	SM 4500 CI- E	
400-135536-6	BAW-7	Total/NA	Water	SM 4500 CI- E	
400-135536-7	DUP-03	Total/NA	Water	SM 4500 CI- E	
MB 400-348438/6	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-348438/7	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-348438/3	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-135676-A-13 MS	Matrix Spike	Total/NA	Water	SM 4500 CI- E	
400-135676-A-13 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 348485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-2	BAW-2	Total/NA	Water	SM 4500 CI- E	
400-135536-3	BAW-3	Total/NA	Water	SM 4500 CI- E	
400-135536-4	BAW-4	Total/NA	Water	SM 4500 CI- E	
400-135536-5	BAW-5	Total/NA	Water	SM 4500 CI- E	
400-135536-8	EB-03	Total/NA	Water	SM 4500 CI- E	
400-135536-9	FB-03	Total/NA	Water	SM 4500 CI- E	
400-135536-10	DUP-04	Total/NA	Water	SM 4500 CI- E	
MB 400-348485/6	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-348485/7	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-348485/3	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-135675-A-10 MS	Matrix Spike	Total/NA	Water	SM 4500 CI- E	
400-135675-A-10 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 348790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total/NA	Water	SM 4500 F C	
400-135536-2	BAW-2	Total/NA	Water	SM 4500 F C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 348790 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-3	BAW-3	Total/NA	Water	SM 4500 F C	
400-135536-4	BAW-4	Total/NA	Water	SM 4500 F C	
400-135536-5	BAW-5	Total/NA	Water	SM 4500 F C	
400-135536-6	BAW-7	Total/NA	Water	SM 4500 F C	
400-135536-7	DUP-03	Total/NA	Water	SM 4500 F C	
400-135536-8	EB-03	Total/NA	Water	SM 4500 F C	
400-135536-9	FB-03	Total/NA	Water	SM 4500 F C	
400-135536-10	DUP-04	Total/NA	Water	SM 4500 F C	
MB 400-348790/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-348790/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-135536-1 MS	BAW-1	Total/NA	Water	SM 4500 F C	
400-135536-1 MSD	BAW-1	Total/NA	Water	SM 4500 F C	
400-135536-6 DU	BAW-7	Total/NA	Water	SM 4500 F C	

Analysis Batch: 349553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-135536-6	BAW-7	Total/NA	Water	SM 4500 SO4 E	
400-135536-7	DUP-03	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
400-135536-2	BAW-2	Total/NA	Water	SM 4500 SO4 E	
400-135536-3	BAW-3	Total/NA	Water	SM 4500 SO4 E	
400-135536-4	BAW-4	Total/NA	Water	SM 4500 SO4 E	
400-135536-5	BAW-5	Total/NA	Water	SM 4500 SO4 E	
400-135536-8	EB-03	Total/NA	Water	SM 4500 SO4 E	
400-135536-9	FB-03	Total/NA	Water	SM 4500 SO4 E	
400-135536-10	DUP-04	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	
400-135675-A-10 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-135675-A-10 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 350180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total/NA	Water	Field Sampling	
400-135536-2	BAW-2	Total/NA	Water	Field Sampling	
400-135536-3	BAW-3	Total/NA	Water	Field Sampling	
400-135536-4	BAW-4	Total/NA	Water	Field Sampling	
400-135536-5	BAW-5	Total/NA	Water	Field Sampling	
400-135536-6	BAW-7	Total/NA	Water	Field Sampling	

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-346980/1-A ^5
Matrix: Water
Analysis Batch: 347398

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 346980

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/24/17 08:38	03/27/17 13:12	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/24/17 08:38	03/27/17 13:12	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/24/17 08:38	03/27/17 13:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 13:12	5
Boron	<0.021		0.050	0.021	mg/L		03/24/17 08:38	03/27/17 13:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/24/17 08:38	03/27/17 13:12	5
Calcium	<0.13		0.25	0.13	mg/L		03/24/17 08:38	03/27/17 13:12	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		03/24/17 08:38	03/27/17 13:12	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/24/17 08:38	03/27/17 13:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/24/17 08:38	03/27/17 13:12	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/24/17 08:38	03/27/17 13:12	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/24/17 08:38	03/27/17 13:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/24/17 08:38	03/27/17 13:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/24/17 08:38	03/27/17 13:12	5

Lab Sample ID: LCS 400-346980/2-A
Matrix: Water
Analysis Batch: 347398

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 346980

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0530		mg/L		106	80 - 120
Arsenic	0.0500	0.0484		mg/L		97	80 - 120
Barium	0.0500	0.0492		mg/L		98	80 - 120
Beryllium	0.0500	0.0475		mg/L		95	80 - 120
Boron	0.100	0.0948		mg/L		95	80 - 120
Cadmium	0.0500	0.0499		mg/L		100	80 - 120
Calcium	5.00	4.52		mg/L		90	80 - 120
Chromium	0.0500	0.0481	^	mg/L		96	80 - 120
Cobalt	0.0500	0.0477		mg/L		95	80 - 120
Lead	0.0500	0.0478		mg/L		96	80 - 120
Lithium	0.0500	0.0491		mg/L		98	80 - 120
Molybdenum	0.100	0.0978		mg/L		98	80 - 120
Selenium	0.0500	0.0481		mg/L		96	80 - 120
Thallium	0.0100	0.00991		mg/L		99	80 - 120

Lab Sample ID: 400-135429-C-10-C MS ^5
Matrix: Water
Analysis Batch: 347398

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 346980

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0563		mg/L		113	75 - 125
Arsenic	<0.00046		0.0500	0.0514		mg/L		103	75 - 125
Barium	0.026		0.0500	0.0749		mg/L		98	75 - 125
Beryllium	<0.00034		0.0500	0.0469		mg/L		94	75 - 125
Boron	<0.021		0.100	0.117		mg/L		117	75 - 125
Cadmium	<0.00034		0.0500	0.0498		mg/L		100	75 - 125
Calcium	0.66		5.00	5.35		mg/L		94	75 - 125
Cobalt	0.00064	J	0.0500	0.0519		mg/L		102	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-135429-C-10-C MS ^5
Matrix: Water
Analysis Batch: 347398

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 346980

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Lead	<0.00035		0.0500	0.0433		mg/L		87		75 - 125
Lithium	<0.0032		0.0500	0.0473		mg/L		95		75 - 125
Molybdenum	0.0051	J	0.100	0.106		mg/L		101		75 - 125
Selenium	0.0027		0.0500	0.0547		mg/L		104		75 - 125
Thallium	<0.000085		0.0100	0.00979		mg/L		98		75 - 125

Lab Sample ID: 400-135429-C-10-D MSD ^5
Matrix: Water
Analysis Batch: 347398

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 346980

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<0.0010		0.0500	0.0529		mg/L		106		75 - 125	6	20
Arsenic	<0.00046		0.0500	0.0498		mg/L		100		75 - 125	3	20
Barium	0.026		0.0500	0.0746		mg/L		98		75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0483		mg/L		97		75 - 125	3	20
Boron	<0.021		0.100	0.120		mg/L		120		75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0499		mg/L		100		75 - 125	0	20
Calcium	0.66		5.00	5.23		mg/L		91		75 - 125	2	20
Cobalt	0.00064	J	0.0500	0.0527		mg/L		104		75 - 125	2	20
Lead	<0.00035		0.0500	0.0435		mg/L		87		75 - 125	0	20
Lithium	<0.0032		0.0500	0.0481		mg/L		96		75 - 125	2	20
Molybdenum	0.0051	J	0.100	0.0987		mg/L		94		75 - 125	8	20
Selenium	0.0027		0.0500	0.0502		mg/L		95		75 - 125	9	20
Thallium	<0.000085		0.0100	0.00993		mg/L		99		75 - 125	1	20

Lab Sample ID: MB 400-347376/1-A ^5
Matrix: Water
Analysis Batch: 348358

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 347376

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0010		0.0025	0.0010	mg/L		03/28/17 10:04	04/03/17 17:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/28/17 10:04	04/03/17 17:54	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/28/17 10:04	04/03/17 17:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 17:54	5
Boron	<0.021		0.050	0.021	mg/L		03/28/17 10:04	04/03/17 17:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/28/17 10:04	04/03/17 17:54	5
Calcium	<0.13		0.25	0.13	mg/L		03/28/17 10:04	04/03/17 17:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/28/17 10:04	04/03/17 17:54	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/28/17 10:04	04/03/17 17:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/28/17 10:04	04/03/17 17:54	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/28/17 10:04	04/03/17 17:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/28/17 10:04	04/03/17 17:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/28/17 10:04	04/03/17 17:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/28/17 10:04	04/03/17 17:54	5

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-347376/2-A
Matrix: Water
Analysis Batch: 348358

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 347376

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0554		mg/L		111	80 - 120
Arsenic	0.0500	0.0498		mg/L		100	80 - 120
Barium	0.0500	0.0490		mg/L		98	80 - 120
Beryllium	0.0500	0.0526		mg/L		105	80 - 120
Boron	0.100	0.0971		mg/L		97	80 - 120
Cadmium	0.0500	0.0495		mg/L		99	80 - 120
Calcium	5.00	4.63		mg/L		93	80 - 120
Chromium	0.0500	0.0492		mg/L		98	80 - 120
Cobalt	0.0500	0.0510		mg/L		102	80 - 120
Lead	0.0500	0.0514		mg/L		103	80 - 120
Lithium	0.0500	0.0533		mg/L		107	80 - 120
Molybdenum	0.100	0.104		mg/L		104	80 - 120
Selenium	0.0500	0.0516		mg/L		103	80 - 120
Thallium	0.0100	0.0110		mg/L		110	80 - 120

Lab Sample ID: 400-135536-6 MS
Matrix: Water
Analysis Batch: 348358

Client Sample ID: BAW-7
Prep Type: Total Recoverable
Prep Batch: 347376

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0569		mg/L		114	75 - 125
Arsenic	0.00052	J	0.0500	0.0530		mg/L		105	75 - 125
Barium	0.012		0.0500	0.0609		mg/L		97	75 - 125
Beryllium	<0.00034		0.0500	0.0546		mg/L		109	75 - 125
Boron	<0.021		0.100	0.118		mg/L		118	75 - 125
Cadmium	<0.00034		0.0500	0.0492		mg/L		98	75 - 125
Calcium	0.65		5.00	5.48		mg/L		97	75 - 125
Chromium	<0.0011		0.0500	0.0506		mg/L		101	75 - 125
Cobalt	0.00098	J	0.0500	0.0515		mg/L		101	75 - 125
Lead	<0.00035		0.0500	0.0507		mg/L		101	75 - 125
Lithium	<0.0032		0.0500	0.0543		mg/L		109	75 - 125
Molybdenum	0.0038	J	0.100	0.109		mg/L		105	75 - 125
Selenium	0.0021		0.0500	0.0583		mg/L		112	75 - 125
Thallium	<0.000085		0.0100	0.0111		mg/L		111	75 - 125

Lab Sample ID: 400-135536-6 MSD
Matrix: Water
Analysis Batch: 348358

Client Sample ID: BAW-7
Prep Type: Total Recoverable
Prep Batch: 347376

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0559		mg/L		112	75 - 125	2	20
Arsenic	0.00052	J	0.0500	0.0512		mg/L		101	75 - 125	4	20
Barium	0.012		0.0500	0.0616		mg/L		99	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0544		mg/L		109	75 - 125	0	20
Boron	<0.021		0.100	0.118		mg/L		118	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0497		mg/L		99	75 - 125	1	20
Calcium	0.65		5.00	5.48		mg/L		97	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0508		mg/L		102	75 - 125	0	20

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-135536-6 MSD
Matrix: Water
Analysis Batch: 348358

Client Sample ID: BAW-7
Prep Type: Total Recoverable
Prep Batch: 347376

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	
Cobalt	0.00098	J	0.0500	0.0530		mg/L		104	75 - 125	3	20
Lead	<0.00035		0.0500	0.0517		mg/L		103	75 - 125	2	20
Lithium	<0.0032		0.0500	0.0543		mg/L		109	75 - 125	0	20
Molybdenum	0.0038	J	0.100	0.106		mg/L		102	75 - 125	3	20
Selenium	0.0021		0.0500	0.0544		mg/L		105	75 - 125	7	20
Thallium	<0.000085		0.0100	0.0112		mg/L		112	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-347049/14-A
Matrix: Water
Analysis Batch: 347469

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 347049

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.000109	J	0.00020	0.000070	mg/L		03/24/17 13:04	03/28/17 12:35	1

Lab Sample ID: LCS 400-347049/15-A
Matrix: Water
Analysis Batch: 347469

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 347049

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.00111		mg/L		110	80 - 120

Lab Sample ID: MB 400-347360/14-A
Matrix: Water
Analysis Batch: 347810

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 347360

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		03/28/17 09:07	03/30/17 09:59	1

Lab Sample ID: LCS 400-347360/15-A
Matrix: Water
Analysis Batch: 347810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 347360

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.00103		mg/L		102	80 - 120

Lab Sample ID: 400-135536-5 MS
Matrix: Water
Analysis Batch: 347810

Client Sample ID: BAW-5
Prep Type: Total/NA
Prep Batch: 347360

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00198		mg/L		98	80 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-135536-5 MSD
Matrix: Water
Analysis Batch: 347810

Client Sample ID: BAW-5
Prep Type: Total/NA
Prep Batch: 347360

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00212		mg/L		105	80 - 120	7	20

Lab Sample ID: 400-135448-H-12-B MS
Matrix: Water
Analysis Batch: 347469

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 347049

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00014	J B	0.00201	0.00215		mg/L		100	80 - 120		

Lab Sample ID: 400-135448-H-12-C MSD
Matrix: Water
Analysis Batch: 347469

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 347049

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00014	J B	0.00201	0.00213		mg/L		99	80 - 120	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-347445/1
Matrix: Water
Analysis Batch: 347445

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/28/17 16:21	1

Lab Sample ID: LCS 400-347445/2
Matrix: Water
Analysis Batch: 347445

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
Total Dissolved Solids	293	282		mg/L		96	78 - 122		

Lab Sample ID: 400-135509-B-1 DU
Matrix: Water
Analysis Batch: 347445

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	6.0		6.00		mg/L		0	5

Lab Sample ID: 400-135639-A-2 DU
Matrix: Water
Analysis Batch: 347445

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	270		274		mg/L		0	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 400-347582/1
Matrix: Water
Analysis Batch: 347582

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/29/17 15:03	1

Lab Sample ID: LCS 400-347582/2
Matrix: Water
Analysis Batch: 347582

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	266		mg/L		91	78 - 122

Lab Sample ID: 400-135536-2 DU
Matrix: Water
Analysis Batch: 347582

Client Sample ID: BAW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	16		16.0		mg/L		0	5

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: 400-135676-A-13 MS
Matrix: Water
Analysis Batch: 348438

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	2.8	F1	10.0	15.2	F1	mg/L		125	73 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-135676-A-13 MSD
Matrix: Water
Analysis Batch: 348438

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	2.8	F1	10.0	15.3	F1	mg/L		125	73 - 120	1	8

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	RPD Limit
Chloride	49		10.0	58.0	4	mg/L		89	73 - 120	0	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-348790/3
Matrix: Water
Analysis Batch: 348790

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			04/06/17 16:31	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 400-348790/4
Matrix: Water
Analysis Batch: 348790

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	3.98		mg/L		100	90 - 110

Lab Sample ID: 400-135536-1 MS
Matrix: Water
Analysis Batch: 348790

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	0.850		mg/L		85	75 - 125

Lab Sample ID: 400-135536-1 MSD
Matrix: Water
Analysis Batch: 348790

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	0.850		mg/L		85	75 - 125	0	4

Lab Sample ID: 400-135536-6 DU
Matrix: Water
Analysis Batch: 348790

Client Sample ID: BAW-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032			<0.032		mg/L				NC	4

Method: SM 4500 SO4 E - Sulfate, Total

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

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
SDG: Bottom Ash

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

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

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: 400-135675-A-10 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	6.9		10.0	15.8		mg/L		89	77 - 128

Lab Sample ID: 400-135675-A-10 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	6.9		10.0	15.9		mg/L		91	77 - 128	1	5

Chain of Custody Record

Client Information		Lab PM: Whitire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-55446-23825.2	
Client Contact: Mr. Gale Sellers		Phone: 850 380 3458		E-Mail: cheyenne.whitire@testamericainc.com		Page: 1-1	
Company: Southern Company		Address: PO BOX 2641 GSC8		City: Birmingham		State, Zip: AL, 35291	
Phone: 205-992-7762(Tel)		PO #: Purchase Order not required		WO #:		Project #: 40006621	
Email: CBSSELLER@SOUTHERNCO.COM		Project Name: CCR -Plant Dantel		Site: Bottom Ash		SSOW#:	
Due Date Requested:		TAT Requested (days):		Field Sampling Parameters		Analysis Requested	
				Mercury		M - Hexane	
				Total Dissolved Solids, 4500 F, C - Fluoride		N - None	
				SM4500 Cl, E - Chloride, SM4500 SO4 F, Sulfate, 2540C -		O - AsNaO2	
				9315 Ra226, 9320 Ra228, Ra226Ra228, GFPC		P - Na2O4S	
				Field Filtered Sample (Yes or No)		Q - Na2SO3	
				Field Filtered Sample (Yes or No)		R - Na2SO4	
				Matrix (W=water, S=solid, O=waste/oil, I=Inert, A=Asst)		S - H2SO4	
				Sample Date		T - TSP Dodecahydrate	
				Sample Time		U - Acetone	
				Sample Type (C=Comp, G=Grab)		V - MCAA	
				Preservation Code		W - pH 4-5	
				D		X	
				N		X	
				I		X	
				D		X	
				N		X	
				I		X	
				D		X	
				N		X	
				I		X	
				D		X	
				N		X	
				I		X	
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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-135536-1

SDG Number: Bottom Ash

Login Number: 135536

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	0.0°C, 0.0°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: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-1
 SDG: Bottom Ash

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: 400-135536-2

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

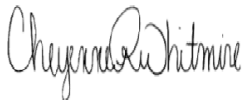
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

4/21/2017 5:46:34 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Job ID: 400-135536-2

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-135536-2**

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-300755. Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 160-300755. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-300750. Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 160-300750. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

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Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-135536-1	BAW-1	Water	03/22/17 14:08	03/23/17 13:00
400-135536-2	BAW-2	Water	03/23/17 06:56	03/23/17 13:00
400-135536-3	BAW-3	Water	03/23/17 07:45	03/23/17 13:00
400-135536-4	BAW-4	Water	03/23/17 08:53	03/23/17 13:00
400-135536-5	BAW-5	Water	03/23/17 09:50	03/23/17 13:00
400-135536-6	BAW-7	Water	03/22/17 13:18	03/23/17 13:00
400-135536-7	DUP-03	Water	03/22/17 12:18	03/23/17 13:00
400-135536-8	EB-03	Water	03/23/17 09:00	03/23/17 13:00
400-135536-9	FB-03	Water	03/23/17 07:30	03/23/17 13:00
400-135536-10	DUP-04	Water	03/23/17 05:56	03/23/17 13:00



Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 03/22/17 14:08
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-1
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.228		0.0943	0.0965	1.00	0.101	pCi/L	03/30/17 09:13	04/21/17 06:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					03/30/17 09:13	04/21/17 06:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0129	U	0.214	0.214	1.00	0.383	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	83.4		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.241	U	0.234	0.235	5.00	0.383	pCi/L		04/21/17 14:24	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
 SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 03/23/17 06:56
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-2
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.138		0.0822	0.0831	1.00	0.109	pCi/L	03/30/17 09:13	04/21/17 06:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/30/17 09:13	04/21/17 06:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0433	U	0.235	0.235	1.00	0.414	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	78.9		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.182	U	0.249	0.249	5.00	0.414	pCi/L		04/21/17 14:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 03/23/17 07:45
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-3
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0403	U	0.0655	0.0656	1.00	0.114	pCi/L	03/30/17 09:13	04/21/17 06:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					03/30/17 09:13	04/21/17 06:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0358	U	0.261	0.261	1.00	0.458	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	82.2		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.0761	U	0.269	0.269	5.00	0.458	pCi/L		04/21/17 14:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 03/23/17 08:53
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-4
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0689	U	0.0683	0.0686	1.00	0.107	pCi/L	03/30/17 09:13	04/21/17 06:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					03/30/17 09:13	04/21/17 06:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0986	U	0.250	0.251	1.00	0.433	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	75.9		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.168	U	0.260	0.260	5.00	0.433	pCi/L		04/21/17 14:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 03/23/17 09:50
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-5
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.220		0.0914	0.0935	1.00	0.0984	pCi/L	03/30/17 09:13	04/21/17 06:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/30/17 09:13	04/21/17 06:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.334	U	0.243	0.245	1.00	0.381	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	82.2		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.554		0.260	0.263	5.00	0.381	pCi/L		04/21/17 14:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 03/22/17 13:18
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-6
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0719	U	0.0683	0.0686	1.00	0.105	pCi/L	03/30/17 09:13	04/21/17 06:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					03/30/17 09:13	04/21/17 06:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.000	U	0.252	0.252	1.00	0.450	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	77.8		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.0719	U	0.261	0.261	5.00	0.450	pCi/L		04/21/17 14:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: DUP-03

Date Collected: 03/22/17 12:18

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-7

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0427	U	0.0557	0.0558	1.00	0.0928	pCi/L	03/30/17 09:13	04/21/17 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					03/30/17 09:13	04/21/17 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.153	U	0.242	0.243	1.00	0.408	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	80.0		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.196	U	0.249	0.249	5.00	0.408	pCi/L		04/21/17 14:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: EB-03
Date Collected: 03/23/17 09:00
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-8
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0718	U	0.0626	0.0629	1.00	0.0932	pCi/L	03/30/17 09:13	04/21/17 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					03/30/17 09:13	04/21/17 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0971	U	0.198	0.199	1.00	0.341	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	81.9		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.169	U	0.208	0.208	5.00	0.341	pCi/L		04/21/17 14:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 03/23/17 07:30
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-9
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.103		0.0661	0.0667	1.00	0.0850	pCi/L	03/30/17 09:13	04/21/17 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					03/30/17 09:13	04/21/17 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.237	U	0.223	0.224	1.00	0.358	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	81.1		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.340	U	0.232	0.233	5.00	0.358	pCi/L		04/21/17 14:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: DUP-04

Lab Sample ID: 400-135536-10

Date Collected: 03/23/17 05:56

Matrix: Water

Date Received: 03/23/17 13:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.208		0.0893	0.0912	1.00	0.0939	pCi/L	03/30/17 09:13	04/21/17 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/30/17 09:13	04/21/17 06:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0428	U	0.212	0.212	1.00	0.390	pCi/L	03/30/17 09:57	04/12/17 15:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/30/17 09:57	04/12/17 15:19	1
Y Carrier	82.2		40 - 110					03/30/17 09:57	04/12/17 15:19	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	0.165	U	0.230	0.231	5.00	0.390	pCi/L		04/21/17 14:24	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 03/22/17 14:08

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:55	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	RTM	TAL SL

Client Sample ID: BAW-2

Date Collected: 03/23/17 06:56

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:56	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	RTM	TAL SL

Client Sample ID: BAW-3

Date Collected: 03/23/17 07:45

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:56	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	RTM	TAL SL

Client Sample ID: BAW-4

Date Collected: 03/23/17 08:53

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:56	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: BAW-5

Date Collected: 03/23/17 09:50

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:56	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	RTM	TAL SL

Client Sample ID: BAW-7

Date Collected: 03/22/17 13:18

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:56	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	RTM	TAL SL

Client Sample ID: DUP-03

Date Collected: 03/22/17 12:18

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:57	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	RTM	TAL SL

Client Sample ID: EB-03

Date Collected: 03/23/17 09:00

Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:57	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 03/23/17 07:30
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:57	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	RTM	TAL SL

Client Sample ID: DUP-04
Date Collected: 03/23/17 05:56
Date Received: 03/23/17 13:00

Lab Sample ID: 400-135536-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			300750	03/30/17 09:13	LDE	TAL SL
Total/NA	Analysis	9315		1	304703	04/21/17 06:57	ALD	TAL SL
Total/NA	Prep	PrecSep_0			300755	03/30/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	303158	04/12/17 15:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304767	04/21/17 14:24	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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Rad

Prep Batch: 300750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total/NA	Water	PrecSep-21	
400-135536-2	BAW-2	Total/NA	Water	PrecSep-21	
400-135536-3	BAW-3	Total/NA	Water	PrecSep-21	
400-135536-4	BAW-4	Total/NA	Water	PrecSep-21	
400-135536-5	BAW-5	Total/NA	Water	PrecSep-21	
400-135536-6	BAW-7	Total/NA	Water	PrecSep-21	
400-135536-7	DUP-03	Total/NA	Water	PrecSep-21	
400-135536-8	EB-03	Total/NA	Water	PrecSep-21	
400-135536-9	FB-03	Total/NA	Water	PrecSep-21	
400-135536-10	DUP-04	Total/NA	Water	PrecSep-21	
MB 160-300750/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-300750/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-300750/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 300755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135536-1	BAW-1	Total/NA	Water	PrecSep_0	
400-135536-2	BAW-2	Total/NA	Water	PrecSep_0	
400-135536-3	BAW-3	Total/NA	Water	PrecSep_0	
400-135536-4	BAW-4	Total/NA	Water	PrecSep_0	
400-135536-5	BAW-5	Total/NA	Water	PrecSep_0	
400-135536-6	BAW-7	Total/NA	Water	PrecSep_0	
400-135536-7	DUP-03	Total/NA	Water	PrecSep_0	
400-135536-8	EB-03	Total/NA	Water	PrecSep_0	
400-135536-9	FB-03	Total/NA	Water	PrecSep_0	
400-135536-10	DUP-04	Total/NA	Water	PrecSep_0	
MB 160-300755/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-300755/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-300755/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-300750/1-A
Matrix: Water
Analysis Batch: 304703

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 300750

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03783	U	0.0695	0.0695	1.00	0.122	pCi/L	03/30/17 09:13	04/21/17 06:53	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					03/30/17 09:13	04/21/17 06:53	1

Lab Sample ID: LCS 160-300750/2-A
Matrix: Water
Analysis Batch: 304703

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 300750

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.02		1.04	1.00	0.0994	pCi/L	88	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	93.2		40 - 110						

Lab Sample ID: LCSD 160-300750/3-A
Matrix: Water
Analysis Batch: 304703

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 300750

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.4	10.51		1.09	1.00	0.115	pCi/L	93	68 - 137	0.23	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	97.3		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-300755/1-A
Matrix: Water
Analysis Batch: 303158

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 300755

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.06237	U	0.243	0.243	1.00	0.424	pCi/L	03/30/17 09:57	04/12/17 15:18	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					03/30/17 09:57	04/12/17 15:18	1
Y Carrier	81.9		40 - 110					03/30/17 09:57	04/12/17 15:18	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
 SDG: Bottom Ash

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

Lab Sample ID: LCS 160-300755/2-A
Matrix: Water
Analysis Batch: 303158

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 300755

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.6	16.52		1.78	1.00	0.514	pCi/L	122	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	93.2		40 - 110
Y Carrier	80.0		40 - 110

Lab Sample ID: LCSD 160-300755/3-A
Matrix: Water
Analysis Batch: 303158

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 300755

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.6	16.07		1.71	1.00	0.413	pCi/L	118	56 - 140	0.13	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	97.3		40 - 110
Y Carrier	81.1		40 - 110

Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):		COC No: 400-55446-23825.2															
Client Contact: Mr. Gale Sellers		Phone: 850 380 3458		E-Mail: cheyenne.whitmire@testamericainc.com		Page: 1-1															
Company: Southern Company		Address: PO BOX 2641 GSC8		City: Birmingham		State, Zip: AL, 35291															
Phone: 205-992-7762(Tel)		PO #: Purchase Order not required		WO #:		Project #: 40006621															
Email: CBSSELLER@SOUTHERNCO.COM		Project Name: CCR -Plant Dantel		Site: Bottom Ash		SSOW#:															
Due Date Requested:		TAT Requested (days):		Field Sampling Parameters		Analysis Requested															
				9315 Ra226, 9320 Ra228, Ra226Ra228, GFPC SM4500 Cl, E-Chloride, SM4500 SO4 F, Sulfate, 2540C - 6020 - Sb, As, Ba, B, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Mercury Total Dissolved Solids, 4500 F, C - Fluoride SM4500 Cl, E-Chloride, SM4500 SO4 F, Sulfate, 2540C - 9315 Ra226, 9320 Ra228, Ra226Ra228, GFPC		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 X - EDTA L - EDTA Other:															
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, B=soil, A=Asst)		Field Filtered Sample (Yes or No)		Field Sampling Parameters		Analysis Requested		Carrier Tracking No(s)		COC No			
BAW-1		3/22/17		1408		G		Water		X		X		X		400-135536		400-135536			
BAW-2		3/23/17		0656		G		Water		X		X		X							
BAW-3		3/23/17		0745		G		Water		X		X		X							
BAW-4		3/23/17		0853		G		Water		X		X		X							
BAW-5		3/23/17		0950		G		Water		X		X		X							
BAW-7		3/22/17		1318		G		Water		X		X		X							
Dup-03		3/22/17		1218		G		W		X		X		X							
EB-03		3/23/17		0900		G		W		X		X		X							
FB-03		3/23/17		0730		G		W		X		X		X							
Dup-04		3/23/17		0556		G		W		X		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		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	
Deliverable Requested: I, II, III, IV, Other (specify)																					
Empty Kit Relinquished by:		Date:		Date:		Date:		Date:		Date:		Date:		Date:		Date:		Date:		Date:	
Relinquished by: [Signature]		3/23/17		1300		Company: [Signature]		Company: [Signature]		Company: [Signature]		Company: [Signature]		Company: [Signature]		Company: [Signature]		Company: [Signature]		Company: [Signature]	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Custody Seals Intact Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		0.0, 0.0 °C		ID-7													



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-135536-2

SDG Number: Bottom Ash

Login Number: 135536

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	0.0°C, 0.0°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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

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	03-31-17 *

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

TestAmerica Pensacola

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-135536-2
SDG: Bottom Ash

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

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: 400-138407-1

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

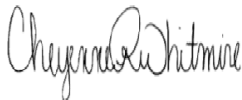
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

6/26/2017 4:05:20 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Job ID: 400-138407-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-138407-1

Metals

Method(s) 6020: The post digestion spike % recovery for Calcium associated with batch 355886 was outside of control limits. The native concentration is >4X the spike added. The serial dilution (SD) meets acceptance criteria.

Method(s) 6020: Due to the high concentration of Calcium the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 355592 and analytical batch 355886 could not be evaluated for accuracy. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for prep batch 355403 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.

General Chemistry

Method(s) SM 4500 SO4 E: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 355483 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Sulfate in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.



Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Lab Sample ID: 400-138407-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.034		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00093	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	16		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	5.01				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-2

Lab Sample ID: 400-138407-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.028		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.84		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00057	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00026	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.5		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.5	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.93				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-3

Lab Sample ID: 400-138407-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00081	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	0.81		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0052		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00036	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00028	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	7.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	1.6	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.86				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-4

Lab Sample ID: 400-138407-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0010	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.0096		0.0025	0.00049	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-4 (Continued)

Lab Sample ID: 400-138407-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.027	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.027		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	7.4		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.040	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2.4	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.19				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-5

Lab Sample ID: 400-138407-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0021		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.046		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.22		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	19		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.21		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0014	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00033	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	90		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	11		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	8.8		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.34				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-7

Lab Sample ID: 400-138407-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.72		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00098	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00026	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.9		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.83				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: EB-03

Lab Sample ID: 400-138407-7

No Detections.

Client Sample ID: FB-03

Lab Sample ID: 400-138407-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.14	J	0.25	0.13	mg/L	5		6020	Total Recoverable

Client Sample ID: DUP-04

Lab Sample ID: 400-138407-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0021		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.046		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.22		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	19		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.21		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.00095	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	11		2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.050	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	9.2		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
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
Field Sampling	Field Sampling	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-138407-1	BAW-1	Water	05/24/17 13:42	05/25/17 10:10
400-138407-2	BAW-2	Water	05/24/17 14:48	05/25/17 10:10
400-138407-3	BAW-3	Water	05/24/17 15:49	05/25/17 10:10
400-138407-4	BAW-4	Water	05/24/17 16:33	05/25/17 10:10
400-138407-5	BAW-5	Water	05/24/17 15:24	05/25/17 10:10
400-138407-6	BAW-7	Water	05/24/17 14:19	05/25/17 10:10
400-138407-7	EB-03	Water	05/24/17 15:33	05/25/17 10:10
400-138407-8	FB-03	Water	05/24/17 15:55	05/25/17 10:10
400-138407-9	DUP-04	Water	05/24/17 14:24	05/25/17 10:10



Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 05/24/17 13:42
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 14:01	06/02/17 15:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/01/17 14:01	06/02/17 15:45	5
Barium	0.034		0.0025	0.00049	mg/L		06/01/17 14:01	06/02/17 15:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 15:45	5
Boron	<0.021		0.050	0.021	mg/L		06/01/17 14:01	06/02/17 15:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 15:45	5
Calcium	1.3		0.25	0.13	mg/L		06/01/17 14:01	06/02/17 15:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 14:01	06/02/17 15:45	5
Cobalt	0.00093 J		0.0025	0.00040	mg/L		06/01/17 14:01	06/02/17 15:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/01/17 14:01	06/02/17 15:45	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/01/17 14:01	06/02/17 15:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/01/17 14:01	06/02/17 15:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/01/17 14:01	06/02/17 15:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 14:01	06/02/17 15:45	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 10:34	06/01/17 13:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			05/27/17 14:35	1
Chloride	5.9		2.0	0.60	mg/L			05/30/17 11:12	1
Fluoride	<0.032		0.10	0.032	mg/L			06/06/17 16:22	1
Sulfate	<1.4		5.0	1.4	mg/L			05/31/17 08:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.01				SU			05/24/17 13:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 05/24/17 14:48
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 14:01	06/02/17 15:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/01/17 14:01	06/02/17 15:50	5
Barium	0.028		0.0025	0.00049	mg/L		06/01/17 14:01	06/02/17 15:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 15:50	5
Boron	<0.021		0.050	0.021	mg/L		06/01/17 14:01	06/02/17 15:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 15:50	5
Calcium	0.84		0.25	0.13	mg/L		06/01/17 14:01	06/02/17 15:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 14:01	06/02/17 15:50	5
Cobalt	0.00057	J	0.0025	0.00040	mg/L		06/01/17 14:01	06/02/17 15:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/01/17 14:01	06/02/17 15:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/01/17 14:01	06/02/17 15:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/01/17 14:01	06/02/17 15:50	5
Selenium	0.00026	J	0.0013	0.00024	mg/L		06/01/17 14:01	06/02/17 15:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 14:01	06/02/17 15:50	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 10:34	06/01/17 13:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			05/27/17 14:35	1
Chloride	5.5		2.0	0.60	mg/L			05/30/17 11:12	1
Fluoride	<0.032		0.10	0.032	mg/L			06/06/17 16:24	1
Sulfate	1.5	J	5.0	1.4	mg/L			05/31/17 08:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.93				SU			05/24/17 14:48	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 05/24/17 15:49
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 14:01	06/02/17 15:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/01/17 14:01	06/02/17 15:54	5
Barium	0.022		0.0025	0.00049	mg/L		06/01/17 14:01	06/02/17 15:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 15:54	5
Boron	<0.021		0.050	0.021	mg/L		06/01/17 14:01	06/02/17 15:54	5
Cadmium	0.00081	J	0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 15:54	5
Calcium	0.81		0.25	0.13	mg/L		06/01/17 14:01	06/02/17 15:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 14:01	06/02/17 15:54	5
Cobalt	0.0052		0.0025	0.00040	mg/L		06/01/17 14:01	06/02/17 15:54	5
Lead	0.00036	J	0.0013	0.00035	mg/L		06/01/17 14:01	06/02/17 15:54	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/01/17 14:01	06/02/17 15:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/01/17 14:01	06/02/17 15:54	5
Selenium	0.00028	J	0.0013	0.00024	mg/L		06/01/17 14:01	06/02/17 15:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 14:01	06/02/17 15:54	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 10:34	06/01/17 13:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			05/27/17 14:35	1
Chloride	7.9		2.0	0.60	mg/L			05/30/17 12:18	1
Fluoride	<0.032		0.10	0.032	mg/L			06/06/17 16:27	1
Sulfate	1.6	J	5.0	1.4	mg/L			05/31/17 08:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.86				SU			05/24/17 15:49	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 05/24/17 16:33
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 14:01	06/02/17 15:59	5
Arsenic	0.0010	J	0.0013	0.00046	mg/L		06/01/17 14:01	06/02/17 15:59	5
Barium	0.0096		0.0025	0.00049	mg/L		06/01/17 14:01	06/02/17 15:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 15:59	5
Boron	0.027	J	0.050	0.021	mg/L		06/01/17 14:01	06/02/17 15:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 15:59	5
Calcium	3.1		0.25	0.13	mg/L		06/01/17 14:01	06/02/17 15:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 14:01	06/02/17 15:59	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		06/01/17 14:01	06/02/17 15:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/01/17 14:01	06/02/17 15:59	5
Lithium	0.027		0.0050	0.0032	mg/L		06/01/17 14:01	06/02/17 15:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/01/17 14:01	06/02/17 15:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/01/17 14:01	06/02/17 15:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 14:01	06/02/17 15:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 10:34	06/01/17 13:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			05/27/17 14:35	1
Chloride	7.4		2.0	0.60	mg/L			05/30/17 12:18	1
Fluoride	0.040	J	0.10	0.032	mg/L			06/06/17 16:29	1
Sulfate	2.4	J	5.0	1.4	mg/L			05/31/17 08:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.19				SU			05/24/17 16:33	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 05/24/17 15:24
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 14:01	06/02/17 16:21	5
Arsenic	0.0021		0.0013	0.00046	mg/L		06/01/17 14:01	06/02/17 16:21	5
Barium	0.046		0.0025	0.00049	mg/L		06/01/17 14:01	06/02/17 16:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:21	5
Boron	0.22		0.050	0.021	mg/L		06/01/17 14:01	06/02/17 16:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:21	5
Calcium	19		0.25	0.13	mg/L		06/01/17 14:01	06/02/17 16:21	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 14:01	06/02/17 16:21	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/01/17 14:01	06/02/17 16:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/01/17 14:01	06/02/17 16:21	5
Lithium	0.21		0.0050	0.0032	mg/L		06/01/17 14:01	06/02/17 16:21	5
Molybdenum	0.0014	J	0.015	0.00085	mg/L		06/01/17 14:01	06/02/17 16:21	5
Selenium	0.00033	J	0.0013	0.00024	mg/L		06/01/17 14:01	06/02/17 16:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 14:01	06/02/17 16:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 10:34	06/01/17 13:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	90		5.0	3.4	mg/L			05/27/17 14:35	1
Chloride	11		2.0	0.60	mg/L			05/30/17 12:18	1
Fluoride	0.060	J	0.10	0.032	mg/L			06/06/17 16:31	1
Sulfate	8.8		5.0	1.4	mg/L			05/31/17 08:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.34				SU			05/24/17 15:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 05/24/17 14:19
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 14:01	06/02/17 16:26	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/01/17 14:01	06/02/17 16:26	5
Barium	0.012		0.0025	0.00049	mg/L		06/01/17 14:01	06/02/17 16:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:26	5
Boron	<0.021		0.050	0.021	mg/L		06/01/17 14:01	06/02/17 16:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:26	5
Calcium	0.72		0.25	0.13	mg/L		06/01/17 14:01	06/02/17 16:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 14:01	06/02/17 16:26	5
Cobalt	0.00098 J		0.0025	0.00040	mg/L		06/01/17 14:01	06/02/17 16:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/01/17 14:01	06/02/17 16:26	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/01/17 14:01	06/02/17 16:26	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/01/17 14:01	06/02/17 16:26	5
Selenium	0.00026 J		0.0013	0.00024	mg/L		06/01/17 14:01	06/02/17 16:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 14:01	06/02/17 16:26	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 10:34	06/01/17 13:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			05/27/17 14:35	1
Chloride	5.9		2.0	0.60	mg/L			05/30/17 12:18	1
Fluoride	<0.032		0.10	0.032	mg/L			06/06/17 16:38	1
Sulfate	<1.4		5.0	1.4	mg/L			05/31/17 08:57	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.83				SU			05/24/17 14:19	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: EB-03
Date Collected: 05/24/17 15:33
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-7
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 14:01	06/02/17 16:30	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/01/17 14:01	06/02/17 16:30	5
Barium	<0.00049		0.0025	0.00049	mg/L		06/01/17 14:01	06/02/17 16:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:30	5
Boron	<0.021		0.050	0.021	mg/L		06/01/17 14:01	06/02/17 16:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:30	5
Calcium	<0.13		0.25	0.13	mg/L		06/01/17 14:01	06/02/17 16:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 14:01	06/02/17 16:30	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/01/17 14:01	06/02/17 16:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/01/17 14:01	06/02/17 16:30	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/01/17 14:01	06/02/17 16:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/01/17 14:01	06/02/17 16:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/01/17 14:01	06/02/17 16:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 14:01	06/02/17 16:30	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 10:34	06/01/17 13:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			05/27/17 14:35	1
Chloride	<0.60		2.0	0.60	mg/L			05/30/17 12:19	1
Fluoride	<0.032		0.10	0.032	mg/L			06/06/17 16:44	1
Sulfate	<1.4		5.0	1.4	mg/L			05/31/17 08:57	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 05/24/17 15:55
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-8
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 14:01	06/02/17 16:35	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/01/17 14:01	06/02/17 16:35	5
Barium	<0.00049		0.0025	0.00049	mg/L		06/01/17 14:01	06/02/17 16:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:35	5
Boron	<0.021		0.050	0.021	mg/L		06/01/17 14:01	06/02/17 16:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:35	5
Calcium	0.14	J	0.25	0.13	mg/L		06/01/17 14:01	06/02/17 16:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 14:01	06/02/17 16:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/01/17 14:01	06/02/17 16:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/01/17 14:01	06/02/17 16:35	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/01/17 14:01	06/02/17 16:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/01/17 14:01	06/02/17 16:35	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/01/17 14:01	06/02/17 16:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 14:01	06/02/17 16:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 10:34	06/01/17 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			05/27/17 14:35	1
Chloride	<0.60		2.0	0.60	mg/L			05/30/17 12:19	1
Fluoride	<0.032		0.10	0.032	mg/L			06/06/17 16:48	1
Sulfate	<1.4		5.0	1.4	mg/L			06/01/17 13:02	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: DUP-04

Date Collected: 05/24/17 14:24

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-9

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 14:01	06/02/17 16:39	5
Arsenic	0.0021		0.0013	0.00046	mg/L		06/01/17 14:01	06/02/17 16:39	5
Barium	0.046		0.0025	0.00049	mg/L		06/01/17 14:01	06/02/17 16:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:39	5
Boron	0.22		0.050	0.021	mg/L		06/01/17 14:01	06/02/17 16:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/01/17 14:01	06/02/17 16:39	5
Calcium	19		0.25	0.13	mg/L		06/01/17 14:01	06/02/17 16:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 14:01	06/02/17 16:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/01/17 14:01	06/02/17 16:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/01/17 14:01	06/02/17 16:39	5
Lithium	0.21		0.0050	0.0032	mg/L		06/01/17 14:01	06/02/17 16:39	5
Molybdenum	0.00095	J	0.015	0.00085	mg/L		06/01/17 14:01	06/02/17 16:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/01/17 14:01	06/02/17 16:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 14:01	06/02/17 16:39	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 10:34	06/01/17 14:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			05/27/17 14:35	1
Chloride	11		2.0	0.60	mg/L			05/30/17 12:45	1
Fluoride	0.050	J	0.10	0.032	mg/L			06/06/17 16:50	1
Sulfate	9.2		5.0	1.4	mg/L			06/01/17 13:02	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Qualifiers

Metals

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.
E	Result exceeded calibration range.
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.

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.
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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 05/24/17 13:42

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			355592	06/01/17 14:01	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	355886	06/02/17 15:45	DRE	TAL PEN
Total/NA	Prep	7470A			355403	05/31/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355602	06/01/17 13:39	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	355171	05/27/17 14:35	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	355367	05/30/17 11:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	356099	06/06/17 16:22	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	355483	05/31/17 08:55	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	358332	05/24/17 13:42	BWS	TAL PEN

Client Sample ID: BAW-2

Date Collected: 05/24/17 14:48

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			355592	06/01/17 14:01	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	355886	06/02/17 15:50	DRE	TAL PEN
Total/NA	Prep	7470A			355403	05/31/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355602	06/01/17 13:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	355171	05/27/17 14:35	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	355367	05/30/17 11:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	356099	06/06/17 16:24	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	355483	05/31/17 08:55	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	358332	05/24/17 14:48	BWS	TAL PEN

Client Sample ID: BAW-3

Date Collected: 05/24/17 15:49

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			355592	06/01/17 14:01	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	355886	06/02/17 15:54	DRE	TAL PEN
Total/NA	Prep	7470A			355403	05/31/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355602	06/01/17 13:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	355171	05/27/17 14:35	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	355366	05/30/17 12:18	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	356099	06/06/17 16:27	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	355483	05/31/17 08:55	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	358332	05/24/17 15:49	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: BAW-4

Lab Sample ID: 400-138407-4

Date Collected: 05/24/17 16:33

Matrix: Water

Date Received: 05/25/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			355592	06/01/17 14:01	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	355886	06/02/17 15:59	DRE	TAL PEN
Total/NA	Prep	7470A			355403	05/31/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355602	06/01/17 13:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	355171	05/27/17 14:35	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	355366	05/30/17 12:18	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	356099	06/06/17 16:29	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	355483	05/31/17 08:55	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	358332	05/24/17 16:33	BWS	TAL PEN

Client Sample ID: BAW-5

Lab Sample ID: 400-138407-5

Date Collected: 05/24/17 15:24

Matrix: Water

Date Received: 05/25/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			355592	06/01/17 14:01	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	355886	06/02/17 16:21	DRE	TAL PEN
Total/NA	Prep	7470A			355403	05/31/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355602	06/01/17 13:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	355171	05/27/17 14:35	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	355366	05/30/17 12:18	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	356099	06/06/17 16:31	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	355483	05/31/17 08:55	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	358332	05/24/17 15:24	BWS	TAL PEN

Client Sample ID: BAW-7

Lab Sample ID: 400-138407-6

Date Collected: 05/24/17 14:19

Matrix: Water

Date Received: 05/25/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			355592	06/01/17 14:01	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	355886	06/02/17 16:26	DRE	TAL PEN
Total/NA	Prep	7470A			355403	05/31/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355602	06/01/17 13:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	355171	05/27/17 14:35	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	355366	05/30/17 12:18	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	356099	06/06/17 16:38	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	355483	05/31/17 08:57	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	358332	05/24/17 14:19	BWS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Client Sample ID: EB-03
Date Collected: 05/24/17 15:33
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			355592	06/01/17 14:01	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	355886	06/02/17 16:30	DRE	TAL PEN
Total/NA	Prep	7470A			355403	05/31/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355602	06/01/17 13:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	355171	05/27/17 14:35	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	355366	05/30/17 12:19	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	356099	06/06/17 16:44	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	355483	05/31/17 08:57	RRC	TAL PEN

Client Sample ID: FB-03
Date Collected: 05/24/17 15:55
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			355592	06/01/17 14:01	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	355886	06/02/17 16:35	DRE	TAL PEN
Total/NA	Prep	7470A			355403	05/31/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355602	06/01/17 14:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	355171	05/27/17 14:35	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	355366	05/30/17 12:19	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	356099	06/06/17 16:48	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	355598	06/01/17 13:02	RRC	TAL PEN

Client Sample ID: DUP-04
Date Collected: 05/24/17 14:24
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			355592	06/01/17 14:01	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	355886	06/02/17 16:39	DRE	TAL PEN
Total/NA	Prep	7470A			355403	05/31/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355602	06/01/17 14:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	355171	05/27/17 14:35	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	355366	05/30/17 12:45	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	356099	06/06/17 16:50	CAC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	355598	06/01/17 13:02	RRC	TAL PEN

Laboratory References:

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

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Metals

Prep Batch: 355403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total/NA	Water	7470A	
400-138407-2	BAW-2	Total/NA	Water	7470A	
400-138407-3	BAW-3	Total/NA	Water	7470A	
400-138407-4	BAW-4	Total/NA	Water	7470A	
400-138407-5	BAW-5	Total/NA	Water	7470A	
400-138407-6	BAW-7	Total/NA	Water	7470A	
400-138407-7	EB-03	Total/NA	Water	7470A	
400-138407-8	FB-03	Total/NA	Water	7470A	
400-138407-9	DUP-04	Total/NA	Water	7470A	
MB 400-355403/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-355403/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-138485-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	
400-138485-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 355592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total Recoverable	Water	3005A	
400-138407-2	BAW-2	Total Recoverable	Water	3005A	
400-138407-3	BAW-3	Total Recoverable	Water	3005A	
400-138407-4	BAW-4	Total Recoverable	Water	3005A	
400-138407-5	BAW-5	Total Recoverable	Water	3005A	
400-138407-6	BAW-7	Total Recoverable	Water	3005A	
400-138407-7	EB-03	Total Recoverable	Water	3005A	
400-138407-8	FB-03	Total Recoverable	Water	3005A	
400-138407-9	DUP-04	Total Recoverable	Water	3005A	
MB 400-355592/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-355592/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-138383-C-1-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-138383-C-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 355602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total/NA	Water	7470A	355403
400-138407-2	BAW-2	Total/NA	Water	7470A	355403
400-138407-3	BAW-3	Total/NA	Water	7470A	355403
400-138407-4	BAW-4	Total/NA	Water	7470A	355403
400-138407-5	BAW-5	Total/NA	Water	7470A	355403
400-138407-6	BAW-7	Total/NA	Water	7470A	355403
400-138407-7	EB-03	Total/NA	Water	7470A	355403
400-138407-8	FB-03	Total/NA	Water	7470A	355403
400-138407-9	DUP-04	Total/NA	Water	7470A	355403
MB 400-355403/14-A	Method Blank	Total/NA	Water	7470A	355403
LCS 400-355403/15-A	Lab Control Sample	Total/NA	Water	7470A	355403
400-138485-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	355403
400-138485-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	355403

Analysis Batch: 355886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total Recoverable	Water	6020	355592
400-138407-2	BAW-2	Total Recoverable	Water	6020	355592
400-138407-3	BAW-3	Total Recoverable	Water	6020	355592

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Metals (Continued)

Analysis Batch: 355886 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-4	BAW-4	Total Recoverable	Water	6020	355592
400-138407-5	BAW-5	Total Recoverable	Water	6020	355592
400-138407-6	BAW-7	Total Recoverable	Water	6020	355592
400-138407-7	EB-03	Total Recoverable	Water	6020	355592
400-138407-8	FB-03	Total Recoverable	Water	6020	355592
400-138407-9	DUP-04	Total Recoverable	Water	6020	355592
MB 400-355592/1-A ^5	Method Blank	Total Recoverable	Water	6020	355592
LCS 400-355592/2-A	Lab Control Sample	Total Recoverable	Water	6020	355592
400-138383-C-1-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	355592
400-138383-C-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	355592

General Chemistry

Analysis Batch: 355171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total/NA	Water	SM 2540C	
400-138407-2	BAW-2	Total/NA	Water	SM 2540C	
400-138407-3	BAW-3	Total/NA	Water	SM 2540C	
400-138407-4	BAW-4	Total/NA	Water	SM 2540C	
400-138407-5	BAW-5	Total/NA	Water	SM 2540C	
400-138407-6	BAW-7	Total/NA	Water	SM 2540C	
400-138407-7	EB-03	Total/NA	Water	SM 2540C	
400-138407-8	FB-03	Total/NA	Water	SM 2540C	
400-138407-9	DUP-04	Total/NA	Water	SM 2540C	
MB 400-355171/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-355171/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-138407-1 DU	BAW-1	Total/NA	Water	SM 2540C	

Analysis Batch: 355366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-3	BAW-3	Total/NA	Water	SM 4500 CI- E	
400-138407-4	BAW-4	Total/NA	Water	SM 4500 CI- E	
400-138407-5	BAW-5	Total/NA	Water	SM 4500 CI- E	
400-138407-6	BAW-7	Total/NA	Water	SM 4500 CI- E	
400-138407-7	EB-03	Total/NA	Water	SM 4500 CI- E	
400-138407-8	FB-03	Total/NA	Water	SM 4500 CI- E	
400-138407-9	DUP-04	Total/NA	Water	SM 4500 CI- E	
MB 400-355366/6	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-355366/7	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-355366/3	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-138410-A-5 MS	Matrix Spike	Total/NA	Water	SM 4500 CI- E	
400-138410-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CI- E	
400-138410-A-7 MS	Matrix Spike	Total/NA	Water	SM 4500 CI- E	
400-138410-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 355367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total/NA	Water	SM 4500 CI- E	
400-138407-2	BAW-2	Total/NA	Water	SM 4500 CI- E	
MB 400-355367/6	Method Blank	Total/NA	Water	SM 4500 CI- E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

General Chemistry (Continued)

Analysis Batch: 355367 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-355367/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-355367/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-138410-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-138410-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 355483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-138407-2	BAW-2	Total/NA	Water	SM 4500 SO4 E	
400-138407-3	BAW-3	Total/NA	Water	SM 4500 SO4 E	
400-138407-4	BAW-4	Total/NA	Water	SM 4500 SO4 E	
400-138407-5	BAW-5	Total/NA	Water	SM 4500 SO4 E	
400-138407-6	BAW-7	Total/NA	Water	SM 4500 SO4 E	
400-138407-7	EB-03	Total/NA	Water	SM 4500 SO4 E	
MB 400-355483/15	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-355483/16	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-355483/12	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-138383-B-3 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-138383-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 355598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-8	FB-03	Total/NA	Water	SM 4500 SO4 E	
400-138407-9	DUP-04	Total/NA	Water	SM 4500 SO4 E	
MB 400-355598/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-355598/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-355598/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-138410-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-138410-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 356099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total/NA	Water	SM 4500 F C	
400-138407-2	BAW-2	Total/NA	Water	SM 4500 F C	
400-138407-3	BAW-3	Total/NA	Water	SM 4500 F C	
400-138407-4	BAW-4	Total/NA	Water	SM 4500 F C	
400-138407-5	BAW-5	Total/NA	Water	SM 4500 F C	
400-138407-6	BAW-7	Total/NA	Water	SM 4500 F C	
400-138407-7	EB-03	Total/NA	Water	SM 4500 F C	
400-138407-8	FB-03	Total/NA	Water	SM 4500 F C	
400-138407-9	DUP-04	Total/NA	Water	SM 4500 F C	
MB 400-356099/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-356099/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-138681-A-2 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-138681-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-138407-6 DU	BAW-7	Total/NA	Water	SM 4500 F C	

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Field Service / Mobile Lab

Analysis Batch: 358332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total/NA	Water	Field Sampling	
400-138407-2	BAW-2	Total/NA	Water	Field Sampling	
400-138407-3	BAW-3	Total/NA	Water	Field Sampling	
400-138407-4	BAW-4	Total/NA	Water	Field Sampling	
400-138407-5	BAW-5	Total/NA	Water	Field Sampling	
400-138407-6	BAW-7	Total/NA	Water	Field Sampling	

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QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-355592/1-A ^5
Matrix: Water
Analysis Batch: 355886

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 355592

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/01/17 13:53	06/02/17 14:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/01/17 13:53	06/02/17 14:14	5
Barium	<0.00049		0.0025	0.00049	mg/L		06/01/17 13:53	06/02/17 14:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/01/17 13:53	06/02/17 14:14	5
Boron	<0.021		0.050	0.021	mg/L		06/01/17 13:53	06/02/17 14:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/01/17 13:53	06/02/17 14:14	5
Calcium	<0.13		0.25	0.13	mg/L		06/01/17 13:53	06/02/17 14:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/01/17 13:53	06/02/17 14:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/01/17 13:53	06/02/17 14:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/01/17 13:53	06/02/17 14:14	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/01/17 13:53	06/02/17 14:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/01/17 13:53	06/02/17 14:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/01/17 13:53	06/02/17 14:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/01/17 13:53	06/02/17 14:14	5

Lab Sample ID: LCS 400-355592/2-A
Matrix: Water
Analysis Batch: 355886

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 355592

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0546		mg/L		109	80 - 120
Arsenic	0.0500	0.0518		mg/L		104	80 - 120
Barium	0.0500	0.0519		mg/L		104	80 - 120
Beryllium	0.0500	0.0516		mg/L		103	80 - 120
Boron	0.100	0.106		mg/L		106	80 - 120
Cadmium	0.0500	0.0518		mg/L		104	80 - 120
Calcium	5.00	5.10		mg/L		102	80 - 120
Chromium	0.0500	0.0478		mg/L		96	80 - 120
Cobalt	0.0500	0.0477		mg/L		95	80 - 120
Lead	0.0500	0.0475		mg/L		95	80 - 120
Lithium	0.0500	0.0547		mg/L		109	80 - 120
Molybdenum	0.100	0.101		mg/L		101	80 - 120
Selenium	0.0500	0.0518		mg/L		104	80 - 120
Thallium	0.0100	0.0105		mg/L		105	80 - 120

Lab Sample ID: 400-138383-C-1-C MS ^5
Matrix: Water
Analysis Batch: 355886

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 355592

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0577		mg/L		115	75 - 125
Arsenic	0.00083	J	0.0500	0.0547		mg/L		108	75 - 125
Barium	0.12		0.0500	0.178		mg/L		107	75 - 125
Beryllium	<0.00034		0.0500	0.0520		mg/L		104	75 - 125
Boron	0.15		0.100	0.260		mg/L		105	75 - 125
Cadmium	<0.00034		0.0500	0.0512		mg/L		102	75 - 125
Calcium	140	E	5.00	152	E 4	mg/L		195	75 - 125
Chromium	<0.0011		0.0500	0.0491		mg/L		98	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-138383-C-1-C MS ^5
Matrix: Water
Analysis Batch: 355886

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 355592

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cobalt	<0.00040		0.0500	0.0492		mg/L		98	75 - 125
Lead	<0.00035		0.0500	0.0470		mg/L		94	75 - 125
Lithium	<0.0032		0.0500	0.0488		mg/L		98	75 - 125
Molybdenum	0.0043	J	0.100	0.107		mg/L		103	75 - 125
Selenium	0.0023		0.0500	0.0544		mg/L		104	75 - 125
Thallium	0.00012	J	0.0100	0.0105		mg/L		104	75 - 125

Lab Sample ID: 400-138383-C-1-D MSD ^5
Matrix: Water
Analysis Batch: 355886

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 355592

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0568		mg/L		114	75 - 125	2	20
Arsenic	0.00083	J	0.0500	0.0547		mg/L		108	75 - 125	0	20
Barium	0.12		0.0500	0.181		mg/L		114	75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0532		mg/L		106	75 - 125	2	20
Boron	0.15		0.100	0.259		mg/L		105	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0530		mg/L		106	75 - 125	4	20
Calcium	140	E	5.00	151	E 4	mg/L		164	75 - 125	1	20
Chromium	<0.0011		0.0500	0.0496		mg/L		99	75 - 125	1	20
Cobalt	<0.00040		0.0500	0.0494		mg/L		99	75 - 125	0	20
Lead	<0.00035		0.0500	0.0488		mg/L		98	75 - 125	4	20
Lithium	<0.0032		0.0500	0.0512		mg/L		102	75 - 125	5	20
Molybdenum	0.0043	J	0.100	0.108		mg/L		104	75 - 125	1	20
Selenium	0.0023		0.0500	0.0534		mg/L		102	75 - 125	2	20
Thallium	0.00012	J	0.0100	0.0107		mg/L		106	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-355403/14-A
Matrix: Water
Analysis Batch: 355602

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355403

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/31/17 09:54	06/01/17 13:11	1

Lab Sample ID: LCS 400-355403/15-A
Matrix: Water
Analysis Batch: 355602

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355403

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00107		mg/L		106	80 - 120

Lab Sample ID: 400-138485-A-3-B MS
Matrix: Water
Analysis Batch: 355602

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 355403

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070	F1	0.00201	0.00160	F1	mg/L		79	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Lab Sample ID: 400-138485-A-3-C MSD
Matrix: Water
Analysis Batch: 355602

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 355403

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070	F1	0.00201	0.00156	F1	mg/L		77	80 - 120	3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-355171/1
Matrix: Water
Analysis Batch: 355171

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			05/27/17 14:35	1

Lab Sample ID: LCS 400-355171/2
Matrix: Water
Analysis Batch: 355171

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	276		mg/L		94	78 - 122

Lab Sample ID: 400-138407-1 DU
Matrix: Water
Analysis Batch: 355171

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	16		16.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-355366/6
Matrix: Water
Analysis Batch: 355366

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			05/30/17 11:52	1

Lab Sample ID: LCS 400-355366/7
Matrix: Water
Analysis Batch: 355366

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 400-355366/3
Matrix: Water
Analysis Batch: 355366

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	2.16		mg/L		108	50 - 150

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-138410-A-5 MS

Matrix: Water

Analysis Batch: 355366

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	9.3		10.0	20.1		mg/L		108	73 - 120

Lab Sample ID: 400-138410-A-5 MSD

Matrix: Water

Analysis Batch: 355366

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	9.3		10.0	20.1		mg/L		109	73 - 120	0	8

Lab Sample ID: 400-138410-A-7 MS

Matrix: Water

Analysis Batch: 355366

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	7.4		10.0	18.7		mg/L		113	73 - 120

Lab Sample ID: 400-138410-A-7 MSD

Matrix: Water

Analysis Batch: 355366

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	7.4		10.0	18.7		mg/L		113	73 - 120	0	8

Lab Sample ID: MB 400-355367/6

Matrix: Water

Analysis Batch: 355367

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			05/30/17 10:13	1

Lab Sample ID: LCS 400-355367/7

Matrix: Water

Analysis Batch: 355367

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	31.3		mg/L		104	90 - 110

Lab Sample ID: MRL 400-355367/3

Matrix: Water

Analysis Batch: 355367

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	2.16		mg/L		108	50 - 150

Lab Sample ID: 400-138410-A-1 MS

Matrix: Water

Analysis Batch: 355367

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	14		10.0	24.3		mg/L		104	73 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Lab Sample ID: 400-138410-A-1 MSD
Matrix: Water
Analysis Batch: 355367

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	14		10.0	24.2		mg/L		104	73 - 120	0	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-356099/3
Matrix: Water
Analysis Batch: 356099

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			06/06/17 15:59	1

Lab Sample ID: LCS 400-356099/4
Matrix: Water
Analysis Batch: 356099

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	3.87		mg/L		97	90 - 110

Lab Sample ID: 400-138681-A-2 MS
Matrix: Water
Analysis Batch: 356099

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	0.040	J	1.00	0.900		mg/L		86	75 - 125

Lab Sample ID: 400-138681-A-2 MSD
Matrix: Water
Analysis Batch: 356099

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	0.040	J	1.00	0.900		mg/L		86	75 - 125	0	4

Lab Sample ID: 400-138407-6 DU
Matrix: Water
Analysis Batch: 356099

Client Sample ID: BAW-7
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

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-355483/15
Matrix: Water
Analysis Batch: 355483

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			05/31/17 07:52	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
SDG: Bottom Ash

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: LCS 400-355483/16
Matrix: Water
Analysis Batch: 355483

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	14.9		mg/L		99	90 - 110

Lab Sample ID: MRL 400-355483/12
Matrix: Water
Analysis Batch: 355483

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	4.55	J	mg/L		91	50 - 150

Lab Sample ID: 400-138383-B-3 MS
Matrix: Water
Analysis Batch: 355483

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	28		10.0	37.1		mg/L		95	77 - 128

Lab Sample ID: 400-138383-B-3 MSD
Matrix: Water
Analysis Batch: 355483

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	28		10.0	35.3		mg/L		77	77 - 128	5	5

Lab Sample ID: MB 400-355598/6
Matrix: Water
Analysis Batch: 355598

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			06/01/17 12:35	1

Lab Sample ID: LCS 400-355598/7
Matrix: Water
Analysis Batch: 355598

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 400-355598/3
Matrix: Water
Analysis Batch: 355598

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	4.52	J	mg/L		90	50 - 150

Lab Sample ID: 400-138410-A-1 MS
Matrix: Water
Analysis Batch: 355598

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	2.0	J	10.0	13.4		mg/L		114	77 - 128

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
 SDG: Bottom Ash


Lab Sample ID: 400-138410-A-1 MSD
Matrix: Water
Analysis Batch: 355598

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	2.0	J	10.0	13.3		mg/L		113	77 - 128	1	5

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Chain of Custody Record

Client Information Client Contact: <u>Mr. Cale Sellers</u> Company: <u>Southern Company</u> Address: <u>PO BOX 2641 GSC8</u> City: <u>Birmingham</u> State, Zip: <u>AL, 35291</u> Phone: <u>205-992-7762(Tel)</u> Email: <u>CBSELLER@SOUTHERNCO.COM</u> Project Name: <u>CCR -Plant Daniel</u> Site: <u>Bottom Ash</u>		Smplier: <u>Rick Hayden dusts / Swipes</u> Lab P#M: <u>Whitmore, Cheyenne R</u> Phone: <u>850-336-0992</u> E-Mail: <u>cheyenne.whitmore@testamericainc.com</u>		Carrier Tracking No(s): COC No: <u>400-55446-23825.2</u> Page: Job #: <u>400-138407</u>	
Due Date Requested: TAT Requested (days): PO #: <u>Purchase Order not required</u> WO #:		Analysis Requested  400-138407 COC			
Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		Field Sampling Parameters Mercury: <u>6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A -</u>		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - NaHSO4 R - Na2SO3 S - HZSO4 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=wastelol, BT=tissue, A=air) Preservation Code		Total Number of containers			
BAW-1	5-24-17	1342	G	Water	
BAW-2		1448		Water	
BAW-3		1549		Water	
BAW-4		1633		Water	
BAW-5		1524		Water	
BAW-7		1419		Water	
EB-03		1533		Water	
FB-03		1555		Water	
DUP-04		1424		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		Special Instructions/Note: Special Instructions/QC Requirements:			
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:		Method of Shipment:			
Relinquished by: <u>[Signature]</u> Date: <u>5-25-17</u>		Received by: <u>[Signature]</u> Date/Time: <u>5-25-17 1010</u> Company: <u>FOA ENV</u>			
Relinquished by:		Received by:			
Relinquished by:		Received by:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: <u>00c, 0.4c, 0.8c, 0.0c, 0.6c 1P2</u>			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-138407-1

SDG Number: Bottom Ash

Login Number: 138407

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	0.0°C, 0.4°C, 0.6°C, 0.0°C, 0.6°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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-1
 SDG: Bottom Ash

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	06-30-17
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	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
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	06-14-18
Washington	State Program	10	C915	05-15-18
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: 400-138407-2

TestAmerica Sample Delivery Group: Bottom Ash

Client Project/Site: CCR -Plant Daniel

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

6/29/2017 10:26:55 AM

Cheyenne Whitmire, Project Manager II

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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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Job ID: 400-138407-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-138407-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-311719. Insufficient sample volume was available to perform a sample duplicate (DU). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. BAW-1 (400-138407-1), BAW-2 (400-138407-2), BAW-3 (400-138407-3), BAW-4 (400-138407-4), BAW-5 (400-138407-5), BAW-7 (400-138407-6), EB-03 (400-138407-7), FB-03 (400-138407-8) and DUP-04 (400-138407-9)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-311384. Insufficient sample volume was available to perform a sample duplicate (DU). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. BAW-1 (400-138407-1), BAW-2 (400-138407-2), BAW-3 (400-138407-3), BAW-4 (400-138407-4), BAW-5 (400-138407-5), BAW-7 (400-138407-6), EB-03 (400-138407-7), FB-03 (400-138407-8) and DUP-04 (400-138407-9)



Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-138407-1	BAW-1	Water	05/24/17 13:42	05/25/17 10:10
400-138407-2	BAW-2	Water	05/24/17 14:48	05/25/17 10:10
400-138407-3	BAW-3	Water	05/24/17 15:49	05/25/17 10:10
400-138407-4	BAW-4	Water	05/24/17 16:33	05/25/17 10:10
400-138407-5	BAW-5	Water	05/24/17 15:24	05/25/17 10:10
400-138407-6	BAW-7	Water	05/24/17 14:19	05/25/17 10:10
400-138407-7	EB-03	Water	05/24/17 15:33	05/25/17 10:10
400-138407-8	FB-03	Water	05/24/17 15:55	05/25/17 10:10
400-138407-9	DUP-04	Water	05/24/17 14:24	05/25/17 10:10

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: BAW-1
Date Collected: 05/24/17 13:42
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-1
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.185		0.0787	0.0804	1.00	0.0638	pCi/L	05/31/17 15:01	06/27/17 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					05/31/17 15:01	06/27/17 06:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.140	U	0.181	0.181	1.00	0.300	pCi/L	06/02/17 10:15	06/15/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					06/02/17 10:15	06/15/17 11:05	1
Y Carrier	95.7		40 - 110					06/02/17 10:15	06/15/17 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	0.325		0.197	0.198	5.00	0.300	pCi/L		06/28/17 13:00	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: BAW-2
Date Collected: 05/24/17 14:48
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-2
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.140		0.0661	0.0672	1.00	0.0647	pCi/L	05/31/17 15:01	06/27/17 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/31/17 15:01	06/27/17 06:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.264	U	0.181	0.183	1.00	0.277	pCi/L	06/02/17 10:15	06/15/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/02/17 10:15	06/15/17 11:05	1
Y Carrier	92.7		40 - 110					06/02/17 10:15	06/15/17 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	0.404		0.193	0.195	5.00	0.277	pCi/L		06/28/17 13:00	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: BAW-3
Date Collected: 05/24/17 15:49
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-3
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0697	U	0.0695	0.0698	1.00	0.109	pCi/L	05/31/17 15:01	06/27/17 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					05/31/17 15:01	06/27/17 06:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0281	U	0.228	0.228	1.00	0.407	pCi/L	06/02/17 10:15	06/15/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					06/02/17 10:15	06/15/17 11:05	1
Y Carrier	94.2		40 - 110					06/02/17 10:15	06/15/17 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	0.0415	U	0.239	0.239	5.00	0.407	pCi/L		06/28/17 13:00	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: BAW-4
Date Collected: 05/24/17 16:33
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-4
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00284	U	0.0422	0.0422	1.00	0.0922	pCi/L	05/31/17 15:01	06/27/17 12:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					05/31/17 15:01	06/27/17 12:23	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0579	U	0.172	0.172	1.00	0.324	pCi/L	06/02/17 10:15	06/15/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					06/02/17 10:15	06/15/17 11:05	1
Y Carrier	90.8		40 - 110					06/02/17 10:15	06/15/17 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	-0.0607	U	0.177	0.177	5.00	0.324	pCi/L		06/28/17 13:00	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: BAW-5
Date Collected: 05/24/17 15:24
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-5
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.215		0.0840	0.0862	1.00	0.0656	pCi/L	05/31/17 15:01	06/27/17 06:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					05/31/17 15:01	06/27/17 06:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.615		0.274	0.279	1.00	0.400	pCi/L	06/02/17 10:15	06/15/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					06/02/17 10:15	06/15/17 11:05	1
Y Carrier	92.0		40 - 110					06/02/17 10:15	06/15/17 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	0.831		0.286	0.292	5.00	0.400	pCi/L		06/28/17 13:00	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: BAW-7
Date Collected: 05/24/17 14:19
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-6
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.163		0.0747	0.0761	1.00	0.0641	pCi/L	05/31/17 15:01	06/27/17 08:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					05/31/17 15:01	06/27/17 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	0.278	U	0.228	0.230	1.00	0.363	pCi/L	06/02/17 10:15	06/15/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					06/02/17 10:15	06/15/17 11:05	1
Y Carrier	86.4		40 - 110					06/02/17 10:15	06/15/17 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	0.441		0.240	0.242	5.00	0.363	pCi/L		06/28/17 13:00	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: EB-03
Date Collected: 05/24/17 15:33
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-7
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00132	U	0.0278	0.0278	1.00	0.0665	pCi/L	05/31/17 15:01	06/27/17 08:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					05/31/17 15:01	06/27/17 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	0.443		0.242	0.246	1.00	0.363	pCi/L	06/02/17 10:15	06/15/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					06/02/17 10:15	06/15/17 11:05	1
Y Carrier	85.6		40 - 110					06/02/17 10:15	06/15/17 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	0.441		0.244	0.247	5.00	0.363	pCi/L		06/28/17 13:00	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: FB-03
Date Collected: 05/24/17 15:55
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-8
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0796	U	0.0688	0.0692	1.00	0.104	pCi/L	05/31/17 15:01	06/27/17 08:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/31/17 15:01	06/27/17 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	-0.0726	U	0.153	0.153	1.00	0.294	pCi/L	06/02/17 10:15	06/15/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					06/02/17 10:15	06/15/17 11:05	1
Y Carrier	90.5		40 - 110					06/02/17 10:15	06/15/17 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	0.00700	U	0.168	0.168	5.00	0.294	pCi/L		06/28/17 13:00	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
 SDG: Bottom Ash

Client Sample ID: DUP-04
Date Collected: 05/24/17 14:24
Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-9
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.105		0.0654	0.0661	1.00	0.0805	pCi/L	05/31/17 15:01	06/27/17 12:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					05/31/17 15:01	06/27/17 12:23	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.482		0.238	0.242	1.00	0.344	pCi/L	06/02/17 10:15	06/15/17 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					06/02/17 10:15	06/15/17 11:05	1
Y Carrier	80.7		40 - 110					06/02/17 10:15	06/15/17 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	0.587		0.247	0.251	5.00	0.344	pCi/L		06/28/17 13:00	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: BAW-1

Date Collected: 05/24/17 13:42

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			311384	05/31/17 15:01	MBC	TAL SL
Total/NA	Analysis	9315		1	315501	06/27/17 06:21	ALD	TAL SL
Total/NA	Prep	PrecSep_0			311719	06/02/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	313462	06/15/17 11:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	315684	06/28/17 13:00	RTM	TAL SL

Client Sample ID: BAW-2

Date Collected: 05/24/17 14:48

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			311384	05/31/17 15:01	MBC	TAL SL
Total/NA	Analysis	9315		1	315501	06/27/17 06:21	ALD	TAL SL
Total/NA	Prep	PrecSep_0			311719	06/02/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	313462	06/15/17 11:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	315684	06/28/17 13:00	RTM	TAL SL

Client Sample ID: BAW-3

Date Collected: 05/24/17 15:49

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			311384	05/31/17 15:01	MBC	TAL SL
Total/NA	Analysis	9315		1	315501	06/27/17 06:21	ALD	TAL SL
Total/NA	Prep	PrecSep_0			311719	06/02/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	313462	06/15/17 11:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	315684	06/28/17 13:00	RTM	TAL SL

Client Sample ID: BAW-4

Date Collected: 05/24/17 16:33

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			311384	05/31/17 15:01	MBC	TAL SL
Total/NA	Analysis	9315		1	315405	06/27/17 12:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			311719	06/02/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	313462	06/15/17 11:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	315684	06/28/17 13:00	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: BAW-5

Date Collected: 05/24/17 15:24

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			311384	05/31/17 15:01	MBC	TAL SL
Total/NA	Analysis	9315		1	315501	06/27/17 06:22	ALD	TAL SL
Total/NA	Prep	PrecSep_0			311719	06/02/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	313462	06/15/17 11:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	315684	06/28/17 13:00	RTM	TAL SL

Client Sample ID: BAW-7

Date Collected: 05/24/17 14:19

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			311384	05/31/17 15:01	MBC	TAL SL
Total/NA	Analysis	9315		1	315501	06/27/17 08:25	ALD	TAL SL
Total/NA	Prep	PrecSep_0			311719	06/02/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	313462	06/15/17 11:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	315684	06/28/17 13:00	RTM	TAL SL

Client Sample ID: EB-03

Date Collected: 05/24/17 15:33

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			311384	05/31/17 15:01	MBC	TAL SL
Total/NA	Analysis	9315		1	315501	06/27/17 08:25	ALD	TAL SL
Total/NA	Prep	PrecSep_0			311719	06/02/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	313462	06/15/17 11:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	315684	06/28/17 13:00	RTM	TAL SL

Client Sample ID: FB-03

Date Collected: 05/24/17 15:55

Date Received: 05/25/17 10:10

Lab Sample ID: 400-138407-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			311384	05/31/17 15:01	MBC	TAL SL
Total/NA	Analysis	9315		1	315501	06/27/17 08:25	ALD	TAL SL
Total/NA	Prep	PrecSep_0			311719	06/02/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	313462	06/15/17 11:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	315684	06/28/17 13:00	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Client Sample ID: DUP-04

Lab Sample ID: 400-138407-9

Date Collected: 05/24/17 14:24

Matrix: Water

Date Received: 05/25/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			311384	05/31/17 15:01	MBC	TAL SL
Total/NA	Analysis	9315		1	315405	06/27/17 12:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			311719	06/02/17 10:15	LDE	TAL SL
Total/NA	Analysis	9320		1	313462	06/15/17 11:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	315684	06/28/17 13:00	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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Rad

Prep Batch: 311384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total/NA	Water	PrecSep-21	
400-138407-2	BAW-2	Total/NA	Water	PrecSep-21	
400-138407-3	BAW-3	Total/NA	Water	PrecSep-21	
400-138407-4	BAW-4	Total/NA	Water	PrecSep-21	
400-138407-5	BAW-5	Total/NA	Water	PrecSep-21	
400-138407-6	BAW-7	Total/NA	Water	PrecSep-21	
400-138407-7	EB-03	Total/NA	Water	PrecSep-21	
400-138407-8	FB-03	Total/NA	Water	PrecSep-21	
400-138407-9	DUP-04	Total/NA	Water	PrecSep-21	
MB 160-311384/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-311384/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-311384/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 311719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138407-1	BAW-1	Total/NA	Water	PrecSep_0	
400-138407-2	BAW-2	Total/NA	Water	PrecSep_0	
400-138407-3	BAW-3	Total/NA	Water	PrecSep_0	
400-138407-4	BAW-4	Total/NA	Water	PrecSep_0	
400-138407-5	BAW-5	Total/NA	Water	PrecSep_0	
400-138407-6	BAW-7	Total/NA	Water	PrecSep_0	
400-138407-7	EB-03	Total/NA	Water	PrecSep_0	
400-138407-8	FB-03	Total/NA	Water	PrecSep_0	
400-138407-9	DUP-04	Total/NA	Water	PrecSep_0	
MB 160-311719/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-311719/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-311719/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-311384/1-A
Matrix: Water
Analysis Batch: 315501

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 311384

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.001285	U	0.0486	0.0486	1.00	0.0998	pCi/L	05/31/17 15:01	06/27/17 06:20	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	95.6		40 - 110		05/31/17 15:01	06/27/17 06:20	1			

Lab Sample ID: LCS 160-311384/2-A
Matrix: Water
Analysis Batch: 315501

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 311384

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.808		1.01	1.00	0.0635	pCi/L	86	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	100		40 - 110						

Lab Sample ID: LCSD 160-311384/3-A
Matrix: Water
Analysis Batch: 315501

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 311384

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.4	9.725		1.01	1.00	0.0752	pCi/L	86	68 - 137	0.04	1
Carrier	LCSD LCSD		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits								
Ba Carrier	96.5		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-311719/1-A
Matrix: Water
Analysis Batch: 313462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 311719

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1254	U	0.207	0.208	1.00	0.351	pCi/L	06/02/17 10:15	06/15/17 11:03	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	95.6		40 - 110		06/02/17 10:15	06/15/17 11:03	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	83.4		40 - 110		06/02/17 10:15	06/15/17 11:03	1			

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
 SDG: Bottom Ash

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

Lab Sample ID: LCS 160-311719/2-A
Matrix: Water
Analysis Batch: 313462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 311719

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.3	14.54		1.54	1.00	0.303	pCi/L	109	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	100		40 - 110
Y Carrier	91.2		40 - 110


Lab Sample ID: LCSD 160-311719/3-A
Matrix: Water
Analysis Batch: 313462

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 311719

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.3	14.58		1.55	1.00	0.344	pCi/L	110	56 - 140	0.01	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	96.5		40 - 110
Y Carrier	88.6		40 - 110

Chain of Custody Record

Client Information Client Contact: <u>Mr. Cale Sellers</u> Company: <u>Southern Company</u> Address: <u>PO BOX 2641 GSC8</u> City: <u>Birmingham</u> State, Zip: <u>AL, 35291</u> Phone: <u>205-992-7762(Tel)</u> Email: <u>CBSELLER@SOUTHERNCO.COM</u> Project Name: <u>CCR -Plant Daniel</u> Site: <u>Bottom Ash</u>		Smplier: <u>Rick Hayden dusts / Swipes</u> Lab P#M: <u>Whitmore, Cheyenne R</u> Phone: <u>850-336-0992</u> E-Mail: <u>cheyenne.whitmore@testamericainc.com</u>		Carrier Tracking No(s): COC No: <u>400-55446-23825.2</u> Page: Job #: <u>400-138407</u>	
Due Date Requested: TAT Requested (days): PO #: <u>Purchase Order not required</u> WO #:		Analysis Requested  400-138407 COC			
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 - Na2SO3 S - HZSO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4.5 Z - other (specify)			
Sample Identification BAW-1 BAW-2 BAW-3 BAW-4 BAW-5 BAW-7 EB-03 FB-03 Dup-04		Sample Date 5-24-17 1478 1549 1633 1524 1419 1533 1555 1424		Sample Time 1342 1448 1549 1633 1524 1419 1533 1555 1424	
Sample Type (C=Comp, G=grab) G G G G G G G G G		Matrix (W=water, S=solid, O=wasteloi, BT=tissue, A=air) Water Water Water Water Water Water Water Water Water		Field Filtered Sample (Yes or No) X X X X X X X X X	
Perform MS/MSD (Yes or No) X X X X X X X X X		Field Sampling Parameters Mercury 6020 - Sb,As,Ba,Bi,Cd,Cr,Cu,Pb,LI,Mo,Se,Tl,7470A 6M4500 Cl, E - Chloride, SM4500 SO4 E - Sulfate, 2540C 9315 Ra226, 9320 Ra228, Ra226Ra228 GPC		Total Number of containers X X X X X X X X X	
Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note:		Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note: Special Instructions/Note:			
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: _____ Relinquished by: _____ Date/Time: <u>5-25-17 1010</u> Company: <u>FOA ENV</u> Relinquished by: _____ Date/Time: _____ Company: _____ 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: <u>0.0, 0.4, 0.8, 0.0, 0.6, 1.2</u>					



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-138407-2

SDG Number: Bottom Ash

Login Number: 138407

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	0.0°C, 0.4°C, 0.6°C, 0.0°C, 0.6°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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

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	06-30-17
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	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
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	06-30-17
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	06-30-17 *
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	06-30-17 *
New York	NELAP	2	11616	03-31-18

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

TestAmerica Pensacola

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-138407-2
SDG: Bottom Ash

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

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: 400-144781-1

TestAmerica SDG: Plant Daniel Bottom Ash App III

Client Project/Site: CCR -Plant Daniel

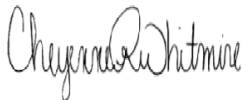
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

11/3/2017 9:39:50 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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Job ID: 400-144781-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144781-1

General Chemistry

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 method blank for analytical batch 372765 contained Chloride above the method detection limit. This target analyte concentration was 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 sample duplicate precision for the following sample associated with analytical batch 372769 was outside control limits: (400-144781-A-8 MSD). The associated Laboratory Control Sample (LCS) precision met acceptance criteria.

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Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-1

Lab Sample ID: 400-144781-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.93		0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA
Chloride	5.7	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.59				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-2

Lab Sample ID: 400-144781-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.76		0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	50		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA
Chloride	6.1	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.65				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-3

Lab Sample ID: 400-144781-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.86		0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA
Chloride	7.7	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.47				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-4

Lab Sample ID: 400-144781-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.030	J	0.050	0.021	mg/L	5		6020	Total
Calcium	3.3		0.25	0.13	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA
Chloride	6.6	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Sulfate	2.0	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	4.96				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-5

Lab Sample ID: 400-144781-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.19		0.050	0.021	mg/L	5		6020	Total
Calcium	17		0.25	0.13	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA
Chloride	9.7	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	4.0	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.23				SU	1		Field Sampling	Total/NA

Client Sample ID: BAW-7

Lab Sample ID: 400-144781-6

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-7 (Continued)

Lab Sample ID: 400-144781-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.70		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	34		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.6	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA
Field pH	4.53				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-144781-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.69		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	52		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	5.4	B	2.0	0.60	mg/L	1		SM 4500 Cl- E	Total/NA

Client Sample ID: EB-01

Lab Sample ID: 400-144781-8

No Detections.

Client Sample ID: FB-01

Lab Sample ID: 400-144781-9

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
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
Field Sampling	Field Sampling	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144781-1	BAW-1	Water	10/16/17 11:59	10/18/17 14:05
400-144781-2	BAW-2	Water	10/16/17 12:34	10/18/17 14:05
400-144781-3	BAW-3	Water	10/16/17 13:22	10/18/17 14:05
400-144781-4	BAW-4	Water	10/16/17 14:12	10/18/17 14:05
400-144781-5	BAW-5	Water	10/16/17 14:48	10/18/17 14:05
400-144781-6	BAW-7	Water	10/16/17 11:17	10/18/17 14:05
400-144781-7	DUP-01	Water	10/16/17 10:17	10/18/17 14:05
400-144781-8	EB-01	Water	10/16/17 15:00	10/18/17 14:05
400-144781-9	FB-01	Water	10/16/17 13:40	10/18/17 14:05

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Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
 SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-1
Date Collected: 10/16/17 11:59
Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/20/17 13:50	10/23/17 13:46	5
Calcium	0.93		0.25	0.13	mg/L		10/20/17 13:50	10/23/17 13:46	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		5.0	3.4	mg/L			10/20/17 10:20	1
Chloride	5.7	B	2.0	0.60	mg/L			10/20/17 15:59	1
Fluoride	<0.032		0.10	0.032	mg/L			11/01/17 07:55	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 11:37	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.59				SU			10/16/17 11:59	1

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Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
 SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-2
Date Collected: 10/16/17 12:34
Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/20/17 13:50	10/23/17 13:50	5
Calcium	0.76		0.25	0.13	mg/L		10/20/17 13:50	10/23/17 13:50	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	50		5.0	3.4	mg/L			10/20/17 10:20	1
Chloride	6.1	B	2.0	0.60	mg/L			10/20/17 16:01	1
Fluoride	<0.032		0.10	0.032	mg/L			11/01/17 08:08	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 11:37	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.65				SU			10/16/17 12:34	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-3

Date Collected: 10/16/17 13:22

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-3

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/20/17 13:50	10/23/17 13:55	5
Calcium	0.86		0.25	0.13	mg/L		10/20/17 13:50	10/23/17 13:55	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			10/20/17 10:20	1
Chloride	7.7	B	2.0	0.60	mg/L			10/20/17 15:59	1
Fluoride	<0.032		0.10	0.032	mg/L			11/01/17 08:11	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 11:37	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.47				SU			10/16/17 13:22	1

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Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-4
Date Collected: 10/16/17 14:12
Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.030	J	0.050	0.021	mg/L	-	10/20/17 13:50	10/23/17 13:59	5
Calcium	3.3		0.25	0.13	mg/L	-	10/20/17 13:50	10/23/17 13:59	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		5.0	3.4	mg/L	-		10/20/17 10:20	1
Chloride	6.6	B	2.0	0.60	mg/L	-		10/20/17 15:59	1
Fluoride	<0.032		0.10	0.032	mg/L	-		11/01/17 08:13	1
Sulfate	2.0	J	5.0	1.4	mg/L	-		10/20/17 11:37	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.96				SU	-		10/16/17 14:12	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-5
Date Collected: 10/16/17 14:48
Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.19		0.050	0.021	mg/L		10/20/17 13:50	10/23/17 14:04	5
Calcium	17		0.25	0.13	mg/L		10/20/17 13:50	10/23/17 14:04	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			10/20/17 10:20	1
Chloride	9.7	B	2.0	0.60	mg/L			10/20/17 16:01	1
Fluoride	0.060	J	0.10	0.032	mg/L			11/01/17 08:16	1
Sulfate	4.0	J	5.0	1.4	mg/L			10/20/17 11:37	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.23				SU			10/16/17 14:48	1

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Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
 SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-7
Date Collected: 10/16/17 11:17
Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/20/17 13:50	10/23/17 14:08	5
Calcium	0.70		0.25	0.13	mg/L		10/20/17 13:50	10/23/17 14:08	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34		5.0	3.4	mg/L			10/20/17 10:20	1
Chloride	5.6	B	2.0	0.60	mg/L			10/20/17 15:59	1
Fluoride	<0.032		0.10	0.032	mg/L			11/01/17 08:18	1
Sulfate	<1.4		5.0	1.4	mg/L			10/20/17 11:37	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.53				SU			10/16/17 11:17	1

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Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
 SDG: Plant Daniel Bottom Ash App III

Client Sample ID: DUP-01
Date Collected: 10/16/17 10:17
Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-7
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/20/17 13:50	10/23/17 14:13	5
Calcium	0.69		0.25	0.13	mg/L		10/20/17 13:50	10/23/17 14:13	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	52		5.0	3.4	mg/L			10/21/17 15:56	1
Chloride	5.4	B	2.0	0.60	mg/L			10/21/17 10:26	1
Fluoride	<0.032		0.10	0.032	mg/L			11/01/17 08:21	1
Sulfate	<1.4		5.0	1.4	mg/L			10/21/17 13:06	1



Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
 SDG: Plant Daniel Bottom Ash App III

Client Sample ID: EB-01
Date Collected: 10/16/17 15:00
Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-8
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/20/17 13:50	10/23/17 14:19	5
Calcium	<0.13		0.25	0.13	mg/L		10/20/17 13:50	10/23/17 14:19	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/20/17 10:20	1
Chloride	<0.60		2.0	0.60	mg/L			10/21/17 10:26	1
Fluoride	<0.032		0.10	0.032	mg/L			11/01/17 08:23	1
Sulfate	<1.4	F2	5.0	1.4	mg/L			10/21/17 13:06	1



Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
 SDG: Plant Daniel Bottom Ash App III

Client Sample ID: FB-01
Date Collected: 10/16/17 13:40
Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-9
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/20/17 13:50	10/23/17 14:23	5
Calcium	<0.13		0.25	0.13	mg/L		10/20/17 13:50	10/23/17 14:23	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/21/17 15:56	1
Chloride	<0.60		2.0	0.60	mg/L			10/21/17 10:26	1
Fluoride	<0.032		0.10	0.032	mg/L			11/02/17 07:33	1
Sulfate	<1.4		5.0	1.4	mg/L			10/21/17 13:06	1



Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Qualifiers

Metals

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.
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.

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.
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: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-1

Date Collected: 10/16/17 11:59

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372681	10/20/17 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	373007	10/23/17 13:46	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372648	10/20/17 10:20	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	372717	10/20/17 15:59	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 07:55	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 11:37	JLB	TAL PEN
Total/NA	Analysis	Field Sampling		1	373534	10/16/17 11:59	BWS	TAL PEN

Client Sample ID: BAW-2

Date Collected: 10/16/17 12:34

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372681	10/20/17 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	373007	10/23/17 13:50	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372648	10/20/17 10:20	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	372717	10/20/17 16:01	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 08:08	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 11:37	JLB	TAL PEN
Total/NA	Analysis	Field Sampling		1	373534	10/16/17 12:34	BWS	TAL PEN

Client Sample ID: BAW-3

Date Collected: 10/16/17 13:22

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372681	10/20/17 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	373007	10/23/17 13:55	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372648	10/20/17 10:20	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	372717	10/20/17 15:59	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 08:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 11:37	JLB	TAL PEN
Total/NA	Analysis	Field Sampling		1	373534	10/16/17 13:22	BWS	TAL PEN

Client Sample ID: BAW-4

Date Collected: 10/16/17 14:12

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372681	10/20/17 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	373007	10/23/17 13:59	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Client Sample ID: BAW-4

Date Collected: 10/16/17 14:12

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	372648	10/20/17 10:20	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	372717	10/20/17 15:59	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 08:13	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 11:37	JLB	TAL PEN
Total/NA	Analysis	Field Sampling		1	373534	10/16/17 14:12	BWS	TAL PEN

Client Sample ID: BAW-5

Date Collected: 10/16/17 14:48

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372681	10/20/17 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	373007	10/23/17 14:04	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372648	10/20/17 10:20	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	372717	10/20/17 16:01	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 08:16	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 11:37	JLB	TAL PEN
Total/NA	Analysis	Field Sampling		1	373534	10/16/17 14:48	BWS	TAL PEN

Client Sample ID: BAW-7

Date Collected: 10/16/17 11:17

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372681	10/20/17 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	373007	10/23/17 14:08	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372648	10/20/17 10:20	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	372717	10/20/17 15:59	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 08:18	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372685	10/20/17 11:37	JLB	TAL PEN
Total/NA	Analysis	Field Sampling		1	373534	10/16/17 11:17	BWS	TAL PEN

Client Sample ID: DUP-01

Date Collected: 10/16/17 10:17

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372681	10/20/17 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	373007	10/23/17 14:13	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372778	10/21/17 15:56	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	372765	10/21/17 10:26	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Client Sample ID: DUP-01

Date Collected: 10/16/17 10:17

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 08:21	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372769	10/21/17 13:06	JLB	TAL PEN

Client Sample ID: EB-01

Date Collected: 10/16/17 15:00

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372681	10/20/17 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	373007	10/23/17 14:19	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372648	10/20/17 10:20	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	372765	10/21/17 10:26	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374206	11/01/17 08:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372769	10/21/17 13:06	JLB	TAL PEN

Client Sample ID: FB-01

Date Collected: 10/16/17 13:40

Date Received: 10/18/17 14:05

Lab Sample ID: 400-144781-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372681	10/20/17 13:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	373007	10/23/17 14:23	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372778	10/21/17 15:56	TET	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	372765	10/21/17 10:26	JLB	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	374351	11/02/17 07:33	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	372769	10/21/17 13:06	JLB	TAL PEN

Laboratory References:

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

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Metals

Prep Batch: 372681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-1	BAW-1	Total Recoverable	Water	3005A	
400-144781-2	BAW-2	Total Recoverable	Water	3005A	
400-144781-3	BAW-3	Total Recoverable	Water	3005A	
400-144781-4	BAW-4	Total Recoverable	Water	3005A	
400-144781-5	BAW-5	Total Recoverable	Water	3005A	
400-144781-6	BAW-7	Total Recoverable	Water	3005A	
400-144781-7	DUP-01	Total Recoverable	Water	3005A	
400-144781-8	EB-01	Total Recoverable	Water	3005A	
400-144781-9	FB-01	Total Recoverable	Water	3005A	
MB 400-372681/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-372681/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-144834-A-2-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-144834-A-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 373007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-1	BAW-1	Total Recoverable	Water	6020	372681
400-144781-2	BAW-2	Total Recoverable	Water	6020	372681
400-144781-3	BAW-3	Total Recoverable	Water	6020	372681
400-144781-4	BAW-4	Total Recoverable	Water	6020	372681
400-144781-5	BAW-5	Total Recoverable	Water	6020	372681
400-144781-6	BAW-7	Total Recoverable	Water	6020	372681
400-144781-7	DUP-01	Total Recoverable	Water	6020	372681
400-144781-8	EB-01	Total Recoverable	Water	6020	372681
400-144781-9	FB-01	Total Recoverable	Water	6020	372681
MB 400-372681/1-A ^5	Method Blank	Total Recoverable	Water	6020	372681
LCS 400-372681/2-A	Lab Control Sample	Total Recoverable	Water	6020	372681
400-144834-A-2-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	372681
400-144834-A-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	372681

General Chemistry

Analysis Batch: 372648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-1	BAW-1	Total/NA	Water	SM 2540C	
400-144781-2	BAW-2	Total/NA	Water	SM 2540C	
400-144781-3	BAW-3	Total/NA	Water	SM 2540C	
400-144781-4	BAW-4	Total/NA	Water	SM 2540C	
400-144781-5	BAW-5	Total/NA	Water	SM 2540C	
400-144781-6	BAW-7	Total/NA	Water	SM 2540C	
400-144781-8	EB-01	Total/NA	Water	SM 2540C	
MB 400-372648/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-372648/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144649-A-18 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 372685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-1	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-144781-2	BAW-2	Total/NA	Water	SM 4500 SO4 E	
400-144781-3	BAW-3	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

General Chemistry (Continued)

Analysis Batch: 372685 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-4	BAW-4	Total/NA	Water	SM 4500 SO4 E	
400-144781-5	BAW-5	Total/NA	Water	SM 4500 SO4 E	
400-144781-6	BAW-7	Total/NA	Water	SM 4500 SO4 E	
MB 400-372685/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
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	
400-144781-1 MS	BAW-1	Total/NA	Water	SM 4500 SO4 E	
400-144781-1 MSD	BAW-1	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 372717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-1	BAW-1	Total/NA	Water	SM 4500 Cl- E	
400-144781-2	BAW-2	Total/NA	Water	SM 4500 Cl- E	
400-144781-3	BAW-3	Total/NA	Water	SM 4500 Cl- E	
400-144781-4	BAW-4	Total/NA	Water	SM 4500 Cl- E	
400-144781-5	BAW-5	Total/NA	Water	SM 4500 Cl- E	
400-144781-6	BAW-7	Total/NA	Water	SM 4500 Cl- E	
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	
400-144781-1 MS	BAW-1	Total/NA	Water	SM 4500 Cl- E	
400-144781-1 MSD	BAW-1	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 372765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-7	DUP-01	Total/NA	Water	SM 4500 Cl- E	
400-144781-8	EB-01	Total/NA	Water	SM 4500 Cl- E	
400-144781-9	FB-01	Total/NA	Water	SM 4500 Cl- E	
MB 400-372765/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-372765/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-372765/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-144781-8 MS	EB-01	Total/NA	Water	SM 4500 Cl- E	
400-144781-8 MSD	EB-01	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 372769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-7	DUP-01	Total/NA	Water	SM 4500 SO4 E	
400-144781-8	EB-01	Total/NA	Water	SM 4500 SO4 E	
400-144781-9	FB-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-372769/10	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-372769/11	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-372769/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-144781-8 MS	EB-01	Total/NA	Water	SM 4500 SO4 E	
400-144781-8 MSD	EB-01	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 372778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-7	DUP-01	Total/NA	Water	SM 2540C	
400-144781-9	FB-01	Total/NA	Water	SM 2540C	
MB 400-372778/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-372778/2	Lab Control Sample	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

General Chemistry (Continued)

Analysis Batch: 372778 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144780-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 374206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-1	BAW-1	Total/NA	Water	SM 4500 F C	
400-144781-2	BAW-2	Total/NA	Water	SM 4500 F C	
400-144781-3	BAW-3	Total/NA	Water	SM 4500 F C	
400-144781-4	BAW-4	Total/NA	Water	SM 4500 F C	
400-144781-5	BAW-5	Total/NA	Water	SM 4500 F C	
400-144781-6	BAW-7	Total/NA	Water	SM 4500 F C	
400-144781-7	DUP-01	Total/NA	Water	SM 4500 F C	
400-144781-8	EB-01	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-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	
400-144723-A-120 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-144723-A-120 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 374351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-9	FB-01	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	

Field Service / Mobile Lab

Analysis Batch: 373534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144781-1	BAW-1	Total/NA	Water	Field Sampling	
400-144781-2	BAW-2	Total/NA	Water	Field Sampling	
400-144781-3	BAW-3	Total/NA	Water	Field Sampling	
400-144781-4	BAW-4	Total/NA	Water	Field Sampling	
400-144781-5	BAW-5	Total/NA	Water	Field Sampling	
400-144781-6	BAW-7	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-372681/1-A ^5
Matrix: Water
Analysis Batch: 373007

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 372681

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/20/17 13:50	10/23/17 12:34	5
Calcium	<0.13		0.25	0.13	mg/L		10/20/17 13:50	10/23/17 12:34	5

Lab Sample ID: LCS 400-372681/2-A
Matrix: Water
Analysis Batch: 373007

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 372681

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.100	0.104		mg/L		104	80 - 120
Calcium	5.00	5.11		mg/L		102	80 - 120

Lab Sample ID: 400-144834-A-2-B MS ^5
Matrix: Water
Analysis Batch: 373007

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 372681

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.097		0.100	0.199		mg/L		102	75 - 125
Calcium	23		5.00	30.2	4	mg/L		138	75 - 125

Lab Sample ID: 400-144834-A-2-C MSD ^5
Matrix: Water
Analysis Batch: 373007

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 372681

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Boron	0.097		0.100	0.203		mg/L		106	75 - 125	2	20
Calcium	23		5.00	28.8	4	mg/L		110	75 - 125	5	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-372648/1
Matrix: Water
Analysis Batch: 372648

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/20/17 10:20	1

Lab Sample ID: LCS 400-372648/2
Matrix: Water
Analysis Batch: 372648

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	286		mg/L		98	78 - 122

Lab Sample ID: 400-144649-A-18 DU
Matrix: Water
Analysis Batch: 372648

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	32		32.0		mg/L		0	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 400-372778/1
Matrix: Water
Analysis Batch: 372778

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/21/17 15:56	1

Lab Sample ID: LCS 400-372778/2
Matrix: Water
Analysis Batch: 372778

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	278		mg/L		95	78 - 122

Lab Sample ID: 400-144780-A-1 DU
Matrix: Water
Analysis Batch: 372778

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	34		34.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

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: 400-144781-1 MS
Matrix: Water
Analysis Batch: 372717

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.7	B	10.0	16.2		mg/L		105	73 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-144781-1 MSD
Matrix: Water
Analysis Batch: 372717

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.7	B	10.0	15.5		mg/L		98	73 - 120	5	8

Lab Sample ID: MB 400-372765/6
Matrix: Water
Analysis Batch: 372765

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.635	J	2.0	0.60	mg/L			10/21/17 09:59	1

Lab Sample ID: LCS 400-372765/7
Matrix: Water
Analysis Batch: 372765

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	29.6		mg/L		99	90 - 110

Lab Sample ID: MRL 400-372765/3
Matrix: Water
Analysis Batch: 372765

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	2.26		mg/L		113	50 - 150

Lab Sample ID: 400-144781-8 MS
Matrix: Water
Analysis Batch: 372765

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<0.60		10.0	11.5		mg/L		115	73 - 120

Lab Sample ID: 400-144781-8 MSD
Matrix: Water
Analysis Batch: 372765

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<0.60		10.0	11.6		mg/L		116	73 - 120	0	8

Method: SM 4500 F C - Fluoride

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

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Method: SM 4500 F C - Fluoride (Continued)

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-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
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: 400-144723-A-120 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
Fluoride	0.22		1.00	1.17		mg/L		95	75 - 125

Lab Sample ID: 400-144723-A-120 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	0.22		1.00	1.17		mg/L		95	75 - 125	0	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
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

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

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

Method: SM 4500 SO4 E - Sulfate, Total

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: 400-144781-1 MS
Matrix: Water
Analysis Batch: 372685

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	9.69		mg/L		97	77 - 128

Lab Sample ID: 400-144781-1 MSD
Matrix: Water
Analysis Batch: 372685

Client Sample ID: BAW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	9.75		mg/L		97	77 - 128	1	5

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
SDG: Plant Daniel Bottom Ash App III

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MB 400-372769/10
Matrix: Water
Analysis Batch: 372769

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			10/21/17 13:06	1

Lab Sample ID: LCS 400-372769/11
Matrix: Water
Analysis Batch: 372769

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 400-372769/7
Matrix: Water
Analysis Batch: 372769

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: 400-144781-8 MS
Matrix: Water
Analysis Batch: 372769

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4	F2	10.0	10.1		mg/L		101	77 - 128

Lab Sample ID: 400-144781-8 MSD
Matrix: Water
Analysis Batch: 372769

Client Sample ID: EB-01
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	F2	10.0	9.51	F2	mg/L		95	77 - 128	6	5

Chain of Custody Record

Client Information Mr. Cale Sellers Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Daniel Bottom Ash App III Site: Mississippi		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Phone: 850 380 3458 Carrier Tracking No(s): 400-68553-27819.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40006621 SSOW#:		Analysis Requested Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D SM4500 Cl - Chloride, SM4500 SO4 - Sulfate, 4500 F - Fluoride, 2540C - Total Dissolved Solids 6020 - Boron & Calcium Field Sampling - Field pH	
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:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O/S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Identification BAW-1 BAW-2 BAW-3 BAW-4 BAW-5 BAW-7 DQP-01 EB-01 FB-01		Total Number of containers:	
Sample Date 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17 10/16/17		Sample Time 1159 1234 1332 1412 1448 1117 1017 1500 1340	
Sample Type (C=Comp, G=grab) G G G G G G G G G		Matrix (W=water, S=solid, O=water/soil, BT=Tissue, AA=Air) Water Water Water Water Water Water W W W	
Preservation Code: G G G G G G G G G		Special Instructions/Note: Special Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: _____ Date: _____ Relinquished by: <i>B.S. Stoyanovoye</i> Date: 10-18-17 1255 Relinquished by: _____ Date: _____ Relinquished by: _____ Date: _____	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 5.3C IR 8 TO	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-144781-1
SDG Number: Plant Daniel Bottom Ash App III

Login Number: 144781

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	0.3°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: Southern Company
 Project/Site: CCR -Plant Daniel

TestAmerica Job ID: 400-144781-1
 SDG: Plant Daniel Bottom Ash App III

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



Product Name: Low-Flow System

Date: 2016-03-23 11:18:43

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom ash area
Site Name Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter 0.17 in
Tubing Length 75 ft

Pump placement from TOC 68.1 ft

Well Information:

Well ID BAW-1
Well diameter 2 in
Well Total Depth 60.60 ft
Screen Length 5 ft
Depth to Water 21.42 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.4247567 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:54:44	1500.01	23.84	5.04	37.58	0.69	21.42	4.02	111.78
Last 5	10:59:44	1800.01	23.82	5.06	38.02	0.66	21.42	4.10	110.88
Last 5	11:04:44	2100.01	24.13	5.10	38.30	0.59	21.42	4.06	108.18
Last 5	11:09:44	2400.01	23.97	5.09	38.14	0.73	21.42	4.06	106.56
Last 5	11:14:44	2700.01	23.97	5.12	38.24	0.69	21.42	4.16	106.06
Variance 0			0.31	0.03	0.27			-0.03	-2.70
Variance 1			-0.16	-0.01	-0.15			-0.00	-1.62
Variance 2			0.00	0.03	0.09			0.10	-0.50

Notes

Temperature: 70 degrees precipitation: none sampled@1120

Grab Samples

Product Name: Low-Flow System

Date: 2016-03-23 13:51:17

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom ash area
Site Name Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter 0.17 in
Tubing Length 70 ft

Pump placement from TOC 60.4 ft

Well Information:

Well ID BAW-2
Well diameter 2 in
Well Total Depth 65.4 ft
Screen Length 10 ft
Depth to Water 30.89 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.4024396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:27:06	1200.01	24.87	5.69	47.75	1.66	30.89	4.67	99.74
Last 5	13:32:06	1500.01	24.78	5.61	44.43	1.35	30.89	4.63	100.00
Last 5	13:37:06	1800.01	24.82	5.57	42.79	1.17	30.89	4.61	100.66
Last 5	13:42:06	2100.01	24.87	5.54	41.98	1.10	30.89	4.58	102.08
Last 5	13:47:07	2401.01	24.76	5.52	40.98	1.10	30.89	4.57	103.26
Variance 0			0.04	-0.04	-1.64			-0.02	0.66
Variance 1			0.05	-0.03	-0.81			-0.03	1.43
Variance 2			-0.11	-0.01	-1.00			-0.01	1.18

Notes

Temperature:73 degrees precipitation: none sampled@1355

Grab Samples

Product Name: Low-Flow System

Date: 2016-03-23 15:15:18

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom ash area
Site Name Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter 0.17 in
Tubing Length 75 ft

Pump placement from TOC 63.4 ft

Well Information:

Well ID BAW-3
Well diameter 2 in
Well Total Depth 68.4 ft
Screen Length 10 ft
Depth to Water 30.42 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.4247567 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:50:50	1800.01	25.16	5.07	44.82	14.60	30.42	1.56	86.16
Last 5	14:55:50	2100.01	25.13	5.06	44.20	12.50	30.42	1.63	77.91
Last 5	15:00:50	2400.01	25.14	5.06	43.84	11.20	30.42	1.66	71.65
Last 5	15:05:50	2700.01	25.06	5.06	43.46	10.30	30.42	1.70	67.00
Last 5	15:10:50	3000.01	25.14	5.05	43.01	9.46	30.42	1.75	63.25
Variance 0			0.01	-0.00	-0.36			0.03	-6.26
Variance 1			-0.09	0.00	-0.39			0.04	-4.65
Variance 2			0.08	-0.01	-0.45			0.05	-3.76

Notes

Temperature: 74 degrees precipitation: none. Sampled@1515

Grab Samples

Product Name: Low-Flow System

Date: 2016-03-23 17:37:30

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom ash area
Site Name Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter 0.17 in
Tubing Length 75 ft

Pump placement from TOC 64.9 ft

Well Information:

Well ID BAW-4
Well diameter 2 in
Well Total Depth 69.9 ft
Screen Length 10 ft
Depth to Water 27.90 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.4247567 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 42 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	17:08:26	4804.01	23.52	5.38	50.44	13.00	27.92	0.04	-22.25
Last 5	17:13:26	5104.01	23.25	5.39	50.58	12.10	27.92	0.04	-22.87
Last 5	17:18:26	5404.02	23.21	5.39	50.56	11.40	27.92	0.04	-23.76
Last 5	17:23:26	5704.01	23.21	5.38	50.56	10.60	27.92	0.04	-23.61
Last 5	17:33:26	6304.01	23.16	5.38	50.65	9.97	27.92	0.04	-25.08
Variance 0			-0.05	-0.00	-0.02			-0.00	-0.90
Variance 1			-0.00	-0.01	-0.00			0.00	0.15
Variance 2			-0.04	0.01	0.09			-0.00	-1.47

Notes

Temperature: 70 degrees precipitation: none sampled@1745 dup-03@1645 eb-03@1557 fb-03@1607

Grab Samples

Product Name: Low-Flow System

Date: 2016-03-23 18:31:55

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom ash area
Site Name Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter 0.17 in
Tubing Length 75 ft

Pump placement from TOC 64.1 ft

Well Information:

Well ID BAW-5
Well diameter 2 in
Well Total Depth 69.1 ft
Screen Length 10 ft
Depth to Water 31.30 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.4247567 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	18:15:07	300.01	23.34	6.57	155.10	23.10	31.31	0.75	-14.51
Last 5	18:20:07	600.01	23.07	6.61	154.48	10.60	31.31	0.41	-27.27
Last 5	18:25:07	900.01	23.02	6.63	154.60	9.31	31.31	0.35	-32.70
Last 5	18:30:07	1200.01	22.98	6.64	155.46	8.07	31.31	0.32	-36.28
Last 5									
Variance 0			-0.27	0.04	-0.62			-0.33	-12.76
Variance 1			-0.05	0.01	0.12			-0.06	-5.43
Variance 2			-0.04	0.02	0.86			-0.03	-3.58

Notes

Temperature:69 degrees precipitation: none. Sampled@1835

Grab Samples

Product Name: Low-Flow System

Date: 2016-03-23 12:33:40

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom ash area
Site Name Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter 0.17 in
Tubing Length 75 ft

Pump placement from TOC 68.50 ft

Well Information:

Well ID BAW-7
Well diameter 2 in
Well Total Depth 63.50 ft
Screen Length 10 ft
Depth to Water 24.84 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.4247567 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.04 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:09:43	600.01	23.97	4.89	36.62	4.23	24.88	1.84	128.17
Last 5	12:14:43	900.01	24.07	4.88	36.74	4.15	24.98	1.87	118.79
Last 5	12:19:43	1200.01	24.01	4.89	36.70	3.76	24.88	1.86	110.81
Last 5	12:24:43	1500.01	23.98	4.89	36.64	3.73	25.88	1.85	104.90
Last 5	12:29:43	1800.01	23.99	4.89	36.84	3.88	24.88	1.81	100.90
Variance 0			-0.05	0.01	-0.03			-0.01	-7.98
Variance 1			-0.03	-0.00	-0.07			-0.02	-5.91
Variance 2			0.01	0.00	0.20			-0.03	-4.00

Notes

Temperature: 73 degrees precipitation: none. Sampled@ 1240

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-17 12:58:14

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name BAW
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 58.1 ft

Well Information:

Well ID BAW-1
Well diameter 2 in
Well Total Depth 60.6 ft
Screen Length 5 ft
Depth to Water 23.35 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3801225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:36:49	1800.02	24.25	5.45	45.68	0.45	23.36	5.49	40.66
Last 5	12:41:49	2100.03	24.33	5.42	44.65	0.51	23.36	5.35	40.66
Last 5	12:46:49	2400.02	24.41	5.31	43.06	0.41	23.36	5.19	40.67
Last 5	12:51:49	2700.02	24.42	5.21	42.03	0.57	23.36	5.00	41.31
Last 5	12:56:49	3000.02	24.35	5.23	42.27	0.52	23.36	5.15	41.45
Variance 0			0.08	-0.11	-1.59			-0.16	0.01
Variance 1			0.00	-0.10	-1.03			-0.19	0.64
Variance 2			-0.06	0.02	0.24			0.15	0.13

Notes

Sample@1257 cloudy 77

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-17 14:39:21

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom Ash Area
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 80 ft

Pump placement from TOC 64.9 ft

Well Information:

Well ID BAW-4
Well diameter 2 in
Well Total Depth 69.9 ft
Screen Length 10 ft
Depth to Water 29.78 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.4470738 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 52 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:50:20	6618.01	23.52	5.30	48.76	8.00	29.76	0.05	15.07
Last 5	13:55:21	6919.01	23.52	5.31	48.77	8.12	29.76	0.06	14.54
Last 5	14:00:21	7219.01	23.52	5.30	48.79	7.37	29.76	0.06	15.14
Last 5	14:05:21	7519.01	23.57	5.30	48.78	7.56	29.76	0.05	16.60
Last 5	14:10:21	7819.01	23.61	5.32	48.81	7.40	29.76	0.05	14.93
Variance 0			0.00	-0.01	0.02			-0.00	0.60
Variance 1			0.05	0.01	-0.01			-0.00	1.45
Variance 2			0.04	0.01	0.03			-0.00	-1.66

Notes

Sampled@1420 EB-02@1435 FB-02@1357 temperature 78 degrees precipitation none

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-17 11:18:40

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom Ash Area
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 80 ft

Pump placement from TOC 64.1 ft

Well Information:

Well ID BAW-5
Well diameter 2 in
Well Total Depth 69.10 ft
Screen Length 10 ft
Depth to Water 33.35 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.4470738 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:50:50	1800.01	23.53	6.52	218.27	8.43	33.35	0.09	-47.74
Last 5	10:55:51	2101.01	23.52	6.52	216.24	9.12	33.35	0.08	-51.55
Last 5	11:05:51	2701.01	23.34	6.52	216.14	9.65	33.35	0.07	-57.19
Last 5	11:10:51	3001.01	23.31	6.53	216.51	8.73	33.35	0.07	-59.48
Last 5	11:15:52	3302.01	23.30	6.52	215.18	9.15	33.35	0.06	-61.19
Variance 0			-0.18	0.01	-0.11			-0.01	-5.65
Variance 1			-0.02	0.00	0.37			-0.00	-2.28
Variance 2			-0.02	-0.01	-1.33			-0.00	-1.71

Notes

Sampled@1125 temperature 78 degrees precipitation: raining

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-17 11:21:45

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name BAW
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 58.5 ft

Well Information:

Well ID BAW-7
Well diameter 2 in
Well Total Depth 63.5 ft
Screen Length 10 ft
Depth to Water 26.85 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3801225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:04:43	300.06	23.88	4.93	41.82	2.05	26.88	2.59	50.42
Last 5	11:09:43	600.02	23.70	4.93	42.01	2.29	26.88	2.51	47.01
Last 5	11:14:43	900.03	23.65	4.90	41.57	2.42	26.88	2.56	45.76
Last 5	11:19:43	1200.02	23.63	4.92	41.78	2.39	26.88	2.41	44.79
Last 5									
Variance 0			-0.18	-0.00	0.19			-0.08	-3.41
Variance 1			-0.05	-0.02	-0.44			0.05	-1.25
Variance 2			-0.01	0.02	0.21			-0.15	-0.97

Notes

Sampled@1120, DUP-02@1020

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-18 11:16:15

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom Ash Area
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type BP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 75 ft

Pump placement from TOC 60.4 ft

Well Information:

Well ID BAW-2
Well diameter 2 in
Well Total Depth 65.4 ft
Screen Length 10 ft
Depth to Water 32.91 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5547567 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:50:49	600.01	24.83	5.33	36.74	11.00	32.91	4.84	91.60
Last 5	10:55:49	900.01	24.90	5.30	35.98	7.65	32.91	4.67	87.99
Last 5	11:00:49	1200.01	24.93	5.27	35.58	5.43	32.91	4.56	87.14
Last 5	11:05:49	1500.01	24.85	5.24	34.98	2.78	32.91	4.45	87.88
Last 5	11:10:49	1800.01	24.87	5.24	35.13	2.10	32.91	4.41	87.28
Variance 0			0.03	-0.03	-0.41			-0.11	-0.84
Variance 1			-0.08	-0.03	-0.60			-0.11	0.74
Variance 2			0.02	-0.01	0.15			-0.04	-0.61

Notes

Sampled@1120 temperature 78 degrees precipitation none

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-18 09:58:44

Project Information:

Operator Name Shane Bragg
Company Name RDH ENV
Project Name Bottom Ash Area
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type BP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 63.4 ft

Well Information:

Well ID BAW-3
Well diameter 2 in
Well Total Depth 68.4 ft
Screen Length 10 ft
Depth to Water 32.31 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5324396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 44 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:35:41	5409.01	24.84	4.84	40.99	5.78	33.39	0.20	70.24
Last 5	09:40:41	5709.01	24.83	4.85	41.19	5.50	33.39	0.22	71.04
Last 5	09:45:41	6009.01	24.82	4.86	41.05	5.51	33.39	0.21	69.03
Last 5	09:50:41	6309.01	24.78	4.86	40.97	5.59	33.39	0.22	67.41
Last 5	09:55:43	6611.01	24.78	4.86	41.07	4.49	33.39	0.21	67.24
Variance 0			-0.00	0.01	-0.14			-0.01	-2.01
Variance 1			-0.04	0.00	-0.08			0.01	-1.62
Variance 2			0.00	-0.00	0.09			-0.01	-0.17

Notes

Sampled@1000 temperature 77 degrees precipitation none

Grab Samples

Product Name: Low-Flow System

Date: 2016-07-12 14:43:40

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom Ash
Site Name Plant Daniel Bottom Ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 63 ft

Pump placement from TOC 55.6 ft

Well Information:

Well ID BAW-1
Well diameter 2 in
Well Total Depth 60.6 ft
Screen Length 10 ft
Depth to Water 23.83 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3711957 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:31:06	300.02	25.72	5.77	47.07	0.36	23.83	6.19	49.21
Last 5	14:36:06	600.02	25.69	5.73	47.57	0.25	23.83	5.99	49.75
Last 5	14:41:06	900.02	25.66	5.77	46.95	0.21	23.83	6.11	47.84
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.03	-0.04	0.50			-0.20	0.55
Variance 2			-0.03	0.03	-0.61			0.12	-1.92

Notes

Sample@1442 cloudy 85

Grab Samples

Product Name: Low-Flow System

Date: 2016-07-13 07:00:06

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom Ash
Site Name Plant Daniel Bottom Ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 68 ft

Pump placement from TOC 60.5 ft

Well Information:

Well ID BAW-2
Well diameter 2 in
Well Total Depth 65.4 ft
Screen Length 10 ft
Depth to Water 33.3 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5235128 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:38:40	600.02	26.85	5.37	38.86	2.34	33.31	5.12	67.91
Last 5	06:43:40	900.03	26.90	5.34	40.12	1.97	33.31	5.05	65.42
Last 5	06:48:40	1200.02	26.92	5.26	38.78	1.69	33.31	4.90	66.09
Last 5	06:53:40	1500.02	26.92	5.21	38.46	1.39	33.31	4.77	66.37
Last 5	06:58:40	1800.02	27.00	5.17	38.21	1.27	33.31	4.71	66.08
Variance 0			0.02	-0.08	-1.33			-0.15	0.67
Variance 1			-0.00	-0.05	-0.32			-0.12	0.27
Variance 2			0.07	-0.04	-0.25			-0.06	-0.29

Notes

Sample@0659, DUP-03@0559, Sunny 77

Grab Samples

Product Name: Low-Flow System

Date: 2016-07-13 10:33:09

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom Ash
Site Name Plant Daniel Bottom Ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 63.4 ft

Well Information:

Well ID BAW-3
Well diameter 2 in
Well Total Depth 68.4 ft
Screen Length 10 ft
Depth to Water 32.75 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5324396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:12:04	600.03	27.88	5.20	53.37	5.40	32.75	0.81	89.40
Last 5	10:17:04	900.03	27.89	5.17	52.60	5.02	32.75	0.69	87.90
Last 5	10:22:04	1200.04	27.98	5.15	51.37	4.71	32.75	0.53	83.93
Last 5	10:27:04	1500.03	27.98	5.12	50.67	3.83	32.75	0.45	81.14
Last 5	10:32:04	1800.03	28.12	5.11	49.98	3.21	32.75	0.38	79.09
Variance 0			0.09	-0.03	-1.24			-0.15	-3.97
Variance 1			-0.00	-0.02	-0.69			-0.09	-2.78
Variance 2			0.13	-0.01	-0.69			-0.07	-2.06

Notes

Sample@1032 Sunny 88

Grab Samples

Product Name: Low-Flow System

Date: 2016-07-13 09:36:04

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom Ash
Site Name Plant Daniel Bottom Ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 71 ft

Pump placement from TOC 64.9 ft

Well Information:

Well ID BAW-4
Well diameter 2 in
Well Total Depth 69.9 ft
Screen Length 10 ft
Depth to Water 30.27 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5369031 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:14:22	2100.02	26.31	5.40	52.83	6.53	30.30	0.17	43.27
Last 5	09:19:22	2400.02	26.24	5.34	52.76	6.17	30.30	0.18	42.36
Last 5	09:24:22	2700.02	26.46	5.32	52.81	5.18	30.30	0.19	40.98
Last 5	09:29:22	3000.02	26.52	5.32	52.85	4.66	30.30	0.18	37.87
Last 5	09:34:22	3300.03	26.55	5.31	52.74	4.70	30.30	0.16	37.00
Variance 0			0.23	-0.02	0.05			0.00	-1.37
Variance 1			0.05	-0.00	0.04			-0.01	-3.11
Variance 2			0.04	-0.01	-0.11			-0.02	-0.87

Notes

Sample@0935, EB-03@0944 Partly cloudy 88

Grab Samples

Product Name: Low-Flow System

Date: 2016-07-13 08:18:49

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom Ash
Site Name Plant Daniel Bottom Ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 64.1 ft

Well Information:

Well ID BAW-5
Well diameter 2 in
Well Total Depth 69.1 ft
Screen Length 10 ft
Depth to Water 33.76 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5324396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:56:39	2100.02	26.63	6.58	228.84	3.21	33.79	0.86	-39.90
Last 5	08:01:39	2400.02	26.77	6.58	230.56	2.67	33.79	0.67	-44.85
Last 5	08:06:39	2700.02	26.80	6.63	230.80	2.45	33.79	0.63	-46.56
Last 5	08:11:39	3000.02	26.78	6.62	231.43	2.51	33.79	0.45	-50.21
Last 5	08:16:39	3300.02	26.81	6.63	232.19	2.44	33.79	0.45	-49.41
Variance 0			0.03	0.05	0.24			-0.04	-1.71
Variance 1			-0.02	-0.02	0.63			-0.17	-3.65
Variance 2			0.02	0.02	0.76			-0.01	0.80

Notes

Sample@0817, FB-03@0830 Sunny 84

Grab Samples

Product Name: Low-Flow System

Date: 2016-07-12 13:40:37

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom Ash
Site Name Plant Daniel Bottom Ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 58.5 ft

Well Information:

Well ID BAW-7
Well diameter 2 in
Well Total Depth 63.5 ft
Screen Length 10 ft
Depth to Water 27.30 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3801225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.04 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:29:40	300.03	26.10	4.94	40.37	1.22	27.34	2.65	57.50
Last 5	13:34:40	600.02	26.14	4.97	40.36	1.18	27.34	2.69	56.07
Last 5	13:39:40	900.02	26.10	4.93	40.15	1.27	27.34	2.71	55.78
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.04	0.03	-0.01			0.05	-1.42
Variance 2			-0.05	-0.04	-0.21			0.01	-0.29

Notes

Sample@1340 cloudy 85

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-13 13:21:52

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom ash background-4
Site Name Plant Daniel Bottom ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
Tubing Type PP
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 55.6 ft

Well Information:

Well ID BAW-1
Well diameter 2 in
Well Total Depth 60.6 ft
Screen Length 10 ft
Depth to Water 23.37 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3801225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:58:59	900.02	25.71	5.33	46.69	1.71	23.39	5.29	144.45
Last 5	13:03:59	1200.02	25.42	5.19	44.53	1.44	23.39	5.21	141.36
Last 5	13:08:59	1500.03	25.44	5.06	43.14	1.01	23.39	4.91	137.68
Last 5	13:13:59	1800.02	25.37	5.06	42.90	1.12	23.39	5.03	135.49
Last 5	13:18:59	2100.02	25.46	4.98	42.19	1.07	23.39	4.84	134.29
Variance 0			0.02	-0.13	-1.39			-0.29	-3.68
Variance 1			-0.07	0.01	-0.23			0.12	-2.18
Variance 2			0.09	-0.08	-0.71			-0.19	-1.20

Notes

Sample@1321, Sunny 84

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-13 15:39:14

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom ash background-4
Site Name Plant Daniel Bottom ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 74 ft

Pump placement from TOC 64.1 ft

Well Information:

Well ID BAW-5
Well diameter 2 in
Well Total Depth 69.1 ft
Screen Length 10 ft
Depth to Water 33.19 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5502933 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:17:49	1800.02	24.55	6.41	185.54	1.61	33.20	0.08	2.69
Last 5	15:22:49	2100.02	24.41	6.43	185.01	1.72	33.20	0.08	-3.05
Last 5	15:27:49	2400.02	24.60	6.44	185.43	1.89	33.20	0.07	-7.85
Last 5	15:32:49	2700.02	24.80	6.45	184.82	1.74	33.20	0.07	-12.93
Last 5	15:37:49	3000.02	24.72	6.46	185.77	1.84	33.20	0.06	-16.81
Variance 0			0.19	0.01	0.42			-0.00	-4.80
Variance 1			0.20	0.01	-0.61			-0.00	-5.08
Variance 2			-0.08	0.01	0.95			-0.01	-3.88

Notes

Sample@1538 partly cloudy 88

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-13 12:09:28

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom ash background-4
Site Name Plant Daniel Bottom ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type PP
Tubing Type PP
Tubing Diameter .17 in
Tubing Length 68 ft

Pump placement from TOC 58.5 ft

Well Information:

Well ID BAW-7
Well diameter 2 in
Well Total Depth 63.5 ft
Screen Length 10 ft
Depth to Water 26.85 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3935128 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 56 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:47:53	7201.02	23.97	4.74	41.78	8.21	26.86	2.75	137.81
Last 5	11:52:53	7501.02	24.01	4.77	41.68	6.87	26.86	2.85	135.25
Last 5	11:57:53	7801.02	23.99	4.70	42.12	5.62	26.86	2.77	137.48
Last 5	12:02:53	8101.02	24.00	4.72	41.66	5.05	26.86	2.82	136.14
Last 5	12:07:53	8401.02	24.03	4.76	41.93	4.79	26.86	2.77	133.63
Variance 0			-0.03	-0.07	0.44			-0.08	2.24
Variance 1			0.01	0.01	-0.46			0.05	-1.34
Variance 2			0.03	0.04	0.27			-0.05	-2.51

Notes

Sample@1208, cloudy 79

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-14 06:15:36

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom ash background-4
Site Name Plant Daniel Bottom ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type WED
Tubing Type PP
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 60.4 ft

Well Information:

Well ID BAW-2
Well diameter 2 in
Well Total Depth 65.4 ft
Screen Length 10 ft
Depth to Water 32.85 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5324396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:04:34	300.07	24.26	5.16	37.75	1.51	32.85	5.25	71.33
Last 5	06:09:34	600.02	24.17	5.05	36.55	1.66	32.85	5.17	75.63
Last 5	06:14:34	900.02	24.10	5.04	37.70	1.39	32.85	5.06	80.06
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.09	-0.11	-1.20			-0.08	4.30
Variance 2			-0.07	-0.00	1.15			-0.11	4.43

Notes

Sample@0615, Clear 72

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-14 07:42:15

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom ash background-4
Site Name Plant Daniel Bottom ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PP
Tubing Diameter .17 in
Tubing Length 73 ft

Pump placement from TOC 63.4 ft

Well Information:

Well ID BAW-3
Well diameter 2 in
Well Total Depth 68.4 ft
Screen Length 10 ft
Depth to Water 32.26 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.54583 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 21 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:20:35	2402.02	24.96	4.84	47.44	7.41	32.27	0.57	102.70
Last 5	07:25:35	2702.02	25.00	4.85	47.47	6.83	32.27	0.56	105.01
Last 5	07:30:35	3002.02	25.06	4.86	47.63	6.13	32.27	0.54	106.88
Last 5	07:35:35	3302.02	25.05	4.84	47.11	5.45	32.27	0.51	109.18
Last 5	07:40:35	3602.02	25.15	4.84	47.13	4.76	32.27	0.51	111.48
Variance 0			0.05	0.01	0.16			-0.02	1.87
Variance 1			-0.00	-0.02	-0.52			-0.03	2.29
Variance 2			0.09	-0.01	0.03			-0.00	2.30

Notes

Sample@0741, DUP-03@0641, Sunny 73

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-14 09:56:56

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Bottom ash background-4
Site Name Plant Daniel Bottom ash
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 71 ft

Pump placement from TOC 61.9 ft

Well Information:

Well ID BAW-4
Well diameter 2 in
Well Total Depth 66.9 ft
Screen Length 10 ft
Depth to Water 29.8 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5369031 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 38 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:34:46	4500.02	24.40	5.21	51.96	7.16	29.81	0.10	77.54
Last 5	09:39:46	4800.02	24.42	5.21	51.92	6.56	29.81	0.09	76.44
Last 5	09:44:46	5100.02	24.47	5.20	52.01	5.98	29.81	0.09	75.55
Last 5	09:49:46	5400.02	24.51	5.21	52.10	5.27	29.81	0.08	74.51
Last 5	09:54:46	5700.02	24.60	5.21	51.98	4.91	29.81	0.09	73.55
Variance 0			0.05	-0.00	0.09			-0.00	-0.88
Variance 1			0.04	0.00	0.09			-0.01	-1.04
Variance 2			0.10	0.00	-0.12			0.01	-0.96

Notes

Sample@0955, FB-03@1005, EB-03@1015 Sunny 82

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-19 10:15:11

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW BG-5
Site Name Daniel BAW
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 62 ft

Pump placement from TOC 55.6 ft

Well Information:

Well ID BAW-1
Well diameter 2 in
Well Total Depth 60.6 ft
Screen Length 10 ft
Depth to Water 24.55 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7617322 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:54:24	300.07	23.12	4.84	40.70	1.22	24.56	3.79	157.45
Last 5	09:59:24	600.02	23.12	4.76	40.45	1.37	24.56	4.00	152.02
Last 5	10:04:24	900.02	23.34	4.78	41.01	1.19	24.56	4.15	149.64
Last 5	10:09:24	1200.02	23.47	4.80	41.19	1.14	24.56	4.25	147.65
Last 5	10:14:24	1500.02	23.47	4.82	41.47	1.11	24.56	4.31	145.93
Variance 0			0.22	0.02	0.56			0.15	-2.37
Variance 1			0.14	0.02	0.17			0.10	-1.99
Variance 2			-0.01	0.02	0.28			0.07	-1.72

Notes

Sample@1014, Sunny 60

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-19 10:58:46

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW BG-5
Site Name Daniel BAW
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 66 ft

Pump placement from TOC 60.4 ft

Well Information:

Well ID BAW-2
Well diameter 2 in
Well Total Depth 65.4 ft
Screen Length 10 ft
Depth to Water 34.02 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.779586 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:44:23	300.02	23.05	4.89	37.05	8.29	34.05	4.49	155.42
Last 5	10:49:23	600.02	22.91	4.87	37.00	2.67	34.05	4.38	149.71
Last 5	10:54:23	900.02	22.94	4.88	37.13	1.46	34.05	4.38	145.87
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.14	-0.02	-0.05			-0.12	-5.71
Variance 2			0.03	0.01	0.14			-0.00	-3.84

Notes

Sample@1058,Sunny 59

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-19 12:08:12

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW BG-5
Site Name Daniel BAW
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 63.4 ft

Well Information:

Well ID BAW-3
Well diameter 2 in
Well Total Depth 68.4 ft
Screen Length 10 ft
Depth to Water 33.4 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7974396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:46:53	300.08	22.41	4.77	54.58	8.05	33.42	0.26	94.25
Last 5	11:51:53	600.03	22.35	4.75	53.64	5.62	33.42	0.25	97.73
Last 5	11:56:53	900.02	22.56	4.75	52.81	3.49	33.42	0.23	99.47
Last 5	12:01:53	1200.02	22.40	4.74	52.49	2.76	33.42	0.23	100.66
Last 5	12:06:53	1500.02	22.44	4.74	51.91	2.63	33.42	0.23	101.05
Variance 0			0.21	0.00	-0.83			-0.02	1.74
Variance 1			-0.16	-0.00	-0.32			0.00	1.19
Variance 2			0.04	-0.00	-0.58			0.00	0.38

Notes

Sample@1207, Sunny 62

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-19 13:39:39

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW BG-5
Site Name Daniel BAW
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 64.9 ft

Well Information:

Well ID BAW-4
Well diameter 2 in
Well Total Depth 69.9 ft
Screen Length 10 ft
Depth to Water 30.90 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7974396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:18:08	2100.02	21.55	5.16	56.43	9.62	30.90	0.04	69.43
Last 5	13:23:08	2400.02	21.37	5.14	56.56	9.44	30.90	0.04	64.54
Last 5	13:28:08	2700.02	21.63	5.13	56.39	9.74	30.90	0.04	58.64
Last 5	13:33:08	3000.02	21.46	5.13	55.95	9.65	30.90	0.03	54.57
Last 5	13:38:08	3300.02	21.60	5.12	55.95	9.66	30.90	0.04	51.66
Variance 0			0.27	-0.01	-0.17			-0.00	-5.90
Variance 1			-0.17	-0.00	-0.44			-0.00	-4.06
Variance 2			0.13	-0.00	-0.01			0.01	-2.91

Notes

Sample@1338,FB-03@1245 Sunny 62

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-19 15:13:04

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW BG-5
Site Name Daniel BAW
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 64.1 ft

Well Information:

Well ID BAW-5
Well diameter 2 in
Well Total Depth 69.1 ft
Screen Length 10 ft
Depth to Water 34.37 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7974396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:48:16	2100.03	21.30	6.34	171.71	4.71	34.37	0.04	-0.37
Last 5	14:53:16	2400.02	21.46	6.36	171.78	4.72	34.37	0.04	-4.23
Last 5	14:58:16	2700.02	21.58	6.37	171.41	4.65	34.37	0.04	-7.89
Last 5	15:03:16	3000.02	21.73	6.37	171.99	4.58	34.37	0.05	-11.67
Last 5	15:08:16	3300.03	21.69	6.38	171.62	4.44	34.37	0.05	-15.59
Variance 0			0.12	0.01	-0.36			-0.00	-3.66
Variance 1			0.15	0.00	0.57			0.00	-3.77
Variance 2			-0.04	0.01	-0.37			0.00	-3.92

Notes

Sample@1512,EB-03@1525 Sunny 64

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-19 09:08:46

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW BG-5
Site Name Daniel BAW
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 58.5 ft

Well Information:

Well ID BAW-7
Well diameter 2 in
Well Total Depth 63.5 ft
Screen Length 10 ft
Depth to Water 28 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7751225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:52:32	300.05	21.87	4.55	39.91	1.38	28.02	3.50	158.14
Last 5	08:57:32	600.02	22.19	4.54	39.61	2.35	28.02	3.45	155.00
Last 5	09:02:32	900.02	22.21	4.56	39.70	1.99	28.02	3.47	152.12
Last 5	09:07:32	1200.02	22.22	4.56	39.77	1.73	28.02	3.37	149.99
Last 5									
Variance 0			0.32	-0.02	-0.29			-0.05	-3.15
Variance 1			0.02	0.02	0.08			0.02	-2.87
Variance 2			0.00	0.00	0.07			-0.10	-2.13

Notes

Sample@0907,DUP-04@0807 Sunny 59

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-17 14:58:58

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Env
Project Name Bottom ash area BG-6
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 61 ft

Pump placement from TOC 58.1 ft

Well Information:

Well ID BAW-1
Well diameter 2 in
Well Total Depth 60.6 ft
Screen Length 5 ft
Depth to Water 23.30 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7572688 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:35:07	1800.00	24.17	4.95	36.09	0.85	23.35	4.38	48.48
Last 5	14:40:07	2099.99	24.42	5.00	36.30	0.79	23.35	4.37	47.06
Last 5	14:45:07	2399.99	24.24	5.00	36.42	0.89	23.35	4.40	46.90
Last 5	14:50:07	2699.99	24.12	5.04	36.55	0.84	23.35	4.40	46.10
Last 5	14:55:07	2999.99	24.15	5.04	36.76	0.80	23.35	4.44	46.38
Variance 0			-0.18	0.00	0.12			0.03	-0.16
Variance 1			-0.12	0.03	0.14			0.00	-0.80
Variance 2			0.03	0.01	0.21			0.04	0.29

Notes

Sample time 1458. Dup-02 fake time 1358. Cloudy 75.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-17 14:34:49

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BA BKG-6
Site Name Plant Daniel BA
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 60.4 ft

Well Information:

Well ID BAW-2
Well diameter 2 in
Well Total Depth 65.4 ft
Screen Length 10 ft
Depth to Water 32.68 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7974396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:24:02	300.07	24.16	5.07	37.75	5.86	32.68	4.35	65.23
Last 5	14:29:02	600.03	24.10	5.04	37.83	2.92	32.68	4.25	61.21
Last 5	14:34:02	900.02	24.04	5.04	38.11	2.00	32.68	4.24	58.86
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.05	-0.03	0.08			-0.11	-4.02
Variance 2			-0.06	0.00	0.28			-0.01	-2.36

Notes

Sample@1434 Cloudy 76

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-17 15:16:38

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BA BKG-6
Site Name Plant Daniel BA
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 75 ft

Pump placement from TOC 63.4 ft

Well Information:

Well ID BAW-3
Well diameter 2 in
Well Total Depth 68.4 ft
Screen Length 10 ft
Depth to Water 32.08 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.8197567 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:00:04	300.02	24.64	4.96	61.95	4.64	32.10	0.40	29.63
Last 5	15:05:04	600.02	24.74	4.96	60.71	4.03	32.10	0.17	56.57
Last 5	15:10:04	900.02	24.65	4.95	59.42	3.67	32.10	0.18	52.31
Last 5	15:15:04	1200.03	24.58	4.95	58.22	2.85	32.10	0.20	50.53
Last 5									
Variance 0			0.09	0.00	-1.24			-0.22	26.93
Variance 1			-0.09	-0.01	-1.29			0.01	-4.26
Variance 2			-0.06	0.00	-1.20			0.02	-1.78

Notes

Sample@1516, cloudy 74

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-18 07:46:06

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BA BKG-6
Site Name Plant Daniel BA
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 64.9 ft

Well Information:

Well ID BAW-4
Well diameter 2 in
Well Total Depth 69.9 ft
Screen Length 10 ft
Depth to Water 29.7 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7974396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:25:02	2400.02	22.40	5.19	54.55	6.56	29.71	0.16	-11.67
Last 5	07:30:02	2700.02	22.35	5.20	54.58	5.88	29.71	0.17	-12.18
Last 5	07:35:02	3000.02	22.49	5.21	54.70	5.11	29.71	0.17	-12.96
Last 5	07:40:02	3300.02	22.58	5.22	54.62	4.92	29.71	0.17	-13.49
Last 5	07:45:02	3600.02	22.58	5.22	54.65	4.76	29.71	0.17	-13.06
Variance 0			0.14	0.01	0.12			0.00	-0.78
Variance 1			0.08	0.00	-0.08			-0.00	-0.53
Variance 2			0.00	0.00	0.03			0.00	0.43

Notes

Sample @0745, FB-02@0730, Cloudy 67

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-18 08:27:47

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BA BKG-6
Site Name Plant Daniel BA
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 64.1 ft

Well Information:

Well ID BAW-5
Well diameter 2 in
Well Total Depth 69.1 ft
Screen Length 10 ft
Depth to Water 33.15 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7974396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:16:17	300.02	23.08	6.44	168.82	4.16	33.20	0.17	-87.54
Last 5	08:21:17	600.02	23.15	6.45	169.33	2.04	33.20	0.11	-92.08
Last 5	08:26:17	900.02	23.11	6.47	169.77	1.41	33.20	0.11	-93.76
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.07	0.01	0.51			-0.06	-4.54
Variance 2			-0.05	0.02	0.44			0.01	-1.68

Notes

Sample @0826,EB-02,@0840 Cloudy 67

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-17 13:54:55

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BA BKG-6
Site Name Plant Daniel BA
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 58.5 ft

Well Information:

Well ID BAW-7
Well diameter 2 in
Well Total Depth 63.5 ft
Screen Length 10 ft
Depth to Water 26.65 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7751225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.04 in
Total Volume Pumped 178 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:34:00	25503.01	23.50	4.84	40.10	11.60	26.69	3.35	52.80
Last 5	13:39:00	25803.01	23.49	4.86	40.13	11.10	26.69	3.36	53.09
Last 5	13:44:00	26103.02	23.52	4.86	40.14	10.70	26.69	3.37	53.26
Last 5	13:49:00	26403.01	23.50	4.86	40.13	10.40	26.69	3.36	53.11
Last 5	13:54:00	26703.01	23.47	4.86	40.13	9.98	26.69	3.36	53.66
Variance 0			0.02	-0.00	0.01			0.01	0.17
Variance 1			-0.01	-0.00	-0.00			-0.01	-0.15
Variance 2			-0.04	-0.00	-0.00			0.00	0.55

Notes

Sample@1554, cloudy 76

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-22 14:08:59

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name BAW BKG-7
Site Name Plant Daniel Bottom Ash BKG-7
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 58.1 ft

Well Information:

Well ID BAW-1
Well diameter 2 in
Well Total Depth 60.6 ft
Screen Length 5 ft
Depth to Water 23.67 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7751225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:51:30	300.06	25.50	4.77	39.29	2.32	23.69	4.34	149.33
Last 5	13:56:30	600.03	25.44	4.74	39.44	0.69	23.69	4.29	143.26
Last 5	14:01:30	900.02	25.46	4.72	39.40	0.61	23.69	4.32	140.03
Last 5	14:06:30	1200.02	25.27	4.73	39.42	0.54	23.69	4.35	136.49
Last 5									
Variance 0			-0.06	-0.02	0.15			-0.05	-6.06
Variance 1			0.02	-0.02	-0.04			0.03	-3.23
Variance 2			-0.18	0.01	0.02			0.03	-3.54

Notes

Sample@1408, Sunny 78

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-23 06:57:11

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name BAW BKG-7
Site Name Plant Daniel Bottom Ash BKG-7
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 67 ft

Pump placement from TOC 60.4 ft

Well Information:

Well ID BAW-2
Well diameter 2 in
Well Total Depth 65.4 ft
Screen Length 10 ft
Depth to Water 33.25 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7840493 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:46:00	300.06	23.13	4.66	41.49	3.82	33.26	3.89	151.96
Last 5	06:51:00	600.02	23.09	4.63	41.93	1.98	33.26	3.83	159.04
Last 5	06:56:00	900.02	23.11	4.66	42.53	1.72	33.26	3.81	161.45
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.04	-0.03	0.44			-0.06	7.09
Variance 2			0.02	0.03	0.60			-0.02	2.41

Notes

Sample@0656, DUP-04@0556, Sunny 58

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-23 07:46:05

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name BAW BKG-7
Site Name Plant Daniel Bottom Ash BKG-7
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 63.4 ft

Well Information:

Well ID BAW-3
Well diameter 2 in
Well Total Depth 68.4 ft
Screen Length 10 ft
Depth to Water 32.68 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7974396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:25:09	300.02	23.76	4.70	64.52	7.44	32.73	0.12	163.39
Last 5	07:30:09	600.02	23.92	4.69	61.76	4.99	32.73	0.08	169.85
Last 5	07:35:09	900.02	23.96	4.66	59.70	4.68	32.73	0.06	170.27
Last 5	07:40:09	1200.02	24.02	4.66	58.64	4.27	32.73	0.06	168.01
Last 5	07:45:09	1500.02	24.10	4.66	57.29	4.17	32.73	0.07	165.96
Variance 0			0.05	-0.03	-2.06			-0.01	0.42
Variance 1			0.06	0.00	-1.07			-0.00	-2.26
Variance 2			0.07	0.00	-1.34			0.00	-2.05

Notes

Sample@0745, FB-03@0730, Sunny 62

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-23 08:54:16

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name BAW BKG-7
Site Name Plant Daniel Bottom Ash BKG-7
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 71 ft

Pump placement from TOC 64.9 ft

Well Information:

Well ID BAW-4
Well diameter 2 in
Well Total Depth 69.9 ft
Screen Length 10 ft
Depth to Water 30.29 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.8019031 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:33:11	1800.02	23.00	4.99	54.72	6.33	30.29	0.03	28.43
Last 5	08:38:11	2100.02	23.02	4.98	54.73	6.41	30.29	0.03	28.63
Last 5	08:43:11	2400.02	23.16	4.99	54.60	5.74	30.29	0.04	28.88
Last 5	08:48:11	2700.02	23.27	5.00	54.64	5.28	30.29	0.04	30.17
Last 5	08:53:11	3000.02	23.18	5.01	54.54	4.88	30.29	0.04	32.02
Variance 0			0.14	0.01	-0.13			0.01	0.25
Variance 1			0.11	0.01	0.04			-0.00	1.29
Variance 2			-0.08	0.01	-0.10			-0.00	1.85

Notes

Sample@0853, EB-03@0900, Sunny 64

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-23 09:50:47

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name BAW BKG-7
Site Name Plant Daniel Bottom Ash BKG-7
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 71 ft

Pump placement from TOC 64.1 ft

Well Information:

Well ID BAW-5
Well diameter 2 in
Well Total Depth 69.1 ft
Screen Length 10 ft
Depth to Water 33.77 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.8019031 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:29:37	600.02	23.19	6.08	168.84	1.81	33.80	0.03	-30.29
Last 5	09:34:37	900.02	23.19	6.13	169.41	1.27	33.80	0.03	-39.85
Last 5	09:39:37	1200.02	23.26	6.15	169.66	1.35	33.80	0.04	-46.55
Last 5	09:44:37	1500.02	23.28	6.17	169.19	1.47	33.80	0.04	-51.77
Last 5	09:49:37	1800.03	23.28	6.19	169.09	1.66	33.80	0.03	-56.05
Variance 0			0.07	0.03	0.25			0.00	-6.71
Variance 1			0.02	0.02	-0.47			0.00	-5.22
Variance 2			-0.00	0.02	-0.10			-0.00	-4.28

Notes

Sample@0950, Sunny 64

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-22 13:19:17

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name BAW BKG-7
Site Name Plant Daniel Bottom Ash BKG-7
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model Hach

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 58.5 ft

Well Information:

Well ID BAW-7
Well diameter 2 in
Well Total Depth 63.5 ft
Screen Length 10 ft
Depth to Water 27.17 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7751225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 58 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:58:05	7500.02	24.49	4.65	38.89	7.32	27.18	3.52	138.90
Last 5	13:03:05	7800.03	24.57	4.65	38.90	6.89	27.18	3.52	139.70
Last 5	13:08:05	8100.03	24.63	4.65	39.11	5.97	27.18	3.53	139.90
Last 5	13:13:05	8400.03	24.52	4.65	38.93	5.17	27.18	3.51	139.47
Last 5	13:18:05	8700.02	24.63	4.66	38.95	4.86	27.18	3.50	139.04
Variance 0			0.06	-0.00	0.20			0.01	0.20
Variance 1			-0.11	0.00	-0.18			-0.02	-0.42
Variance 2			0.11	0.01	0.03			-0.02	-0.43

Notes

Sample@1318, DUP03@1218, Sunny 76

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-24 13:42:13

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Env
Project Name Bottom ash area BG-8
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 58.1 ft

Well Information:

Well ID BAW-1
Well diameter 2 in
Well Total Depth 60.6 ft
Screen Length 5 ft
Depth to Water 23.00 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7751225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.11 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:29:10	300.03	24.15	5.06	36.96	0.95	23.11	4.45	30.01
Last 5	13:34:10	600.02	24.10	5.04	36.88	0.93	23.11	4.45	31.59
Last 5	13:39:10	900.02	24.26	5.01	36.85	0.87	23.11	4.45	33.50
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.05	-0.02	-0.08			-0.01	1.57
Variance 2			0.16	-0.04	-0.03			0.01	1.92

Notes

Sample time 1342. P/C 77.

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-24 14:49:31

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Env
Project Name Bottom ash area BG-8
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 63.4 ft

Pump placement from TOC 60.4 ft

Well Information:

Well ID BAW-2
Well diameter 2 in
Well Total Depth 65.4 ft
Screen Length 10 ft
Depth to Water 32.45 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.767981 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.08 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:29:27	300.07	24.69	4.82	35.16	2.35	32.52	4.30	55.92
Last 5	14:34:27	600.02	24.69	4.89	35.70	1.93	32.53	4.08	45.52
Last 5	14:39:27	900.02	24.69	4.93	36.15	1.70	32.53	4.03	42.22
Last 5	14:44:27	1200.02	24.64	4.93	36.56	1.51	32.53	4.08	40.61
Last 5									
Variance 0			0.00	0.07	0.54			-0.22	-10.40
Variance 1			-0.00	0.04	0.45			-0.05	-3.30
Variance 2			-0.05	0.00	0.40			0.05	-1.61

Notes

Sample time 1448. P/C 78.

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-24 15:49:45

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Env
Project Name Bottom ash area BG-8
Site Name Plant Daniel
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 72 ft

Pump placement from TOC 63.4 ft

Well Information:

Well ID BAW-3
Well diameter 2 in
Well Total Depth 68.4 ft
Screen Length 10 ft
Depth to Water 31.91 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.8063664 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.07 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:25:24	300.07	25.32	4.85	45.47	7.26	31.98	0.64	65.66
Last 5	15:30:24	600.02	25.35	4.86	44.51	5.68	31.98	0.44	54.29
Last 5	15:35:24	900.02	25.01	4.85	44.01	4.74	31.98	0.38	49.24
Last 5	15:40:24	1199.93	24.95	4.86	43.90	3.79	31.98	0.35	45.98
Last 5	15:45:24	1499.93	25.10	4.86	43.45	4.49	31.98	0.30	43.47
Variance 0			-0.35	-0.01	-0.51			-0.07	-5.04
Variance 1			-0.06	0.02	-0.11			-0.03	-3.26
Variance 2			0.15	-0.00	-0.45			-0.05	-2.51

Notes

Sample time 1549. P/C 77.

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-24 16:33:53

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW BKG-8-8
Site Name Plant Daniel BAW BKG-8
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 72 ft

Pump placement from TOC 64.9 ft

Well Information:

Well ID BAW-4
Well diameter 2 in
Well Total Depth 69.9 ft
Screen Length 10 ft
Depth to Water 29.4 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.8063664 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	16:12:43	1200.02	23.59	5.18	53.42	4.89	29.41	0.12	-161.15
Last 5	16:17:43	1500.02	23.80	5.18	53.46	4.73	29.41	0.13	-162.41
Last 5	16:22:43	1800.02	23.56	5.19	53.56	4.95	29.41	0.13	-163.95
Last 5	16:27:43	2100.02	23.52	5.19	53.51	4.96	29.41	0.13	-164.08
Last 5	16:32:43	2400.02	23.43	5.19	53.67	4.76	29.41	0.14	-165.04
Variance 0			-0.25	0.01	0.10			0.00	-1.54
Variance 1			-0.04	0.00	-0.05			0.00	-0.13
Variance 2			-0.08	-0.01	0.16			0.01	-0.96

Notes

Sample@1633, FB-03@1555, Cloudy 77

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-24 15:26:26

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW BKG-8-8
Site Name Plant Daniel BAW BKG-8
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 71 ft

Pump placement from TOC 64.1 ft

Well Information:

Well ID BAW-5
Well diameter 2 in
Well Total Depth 69.1 ft
Screen Length 10 ft
Depth to Water 32.78 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.8019031 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:04:15	900.02	24.78	6.26	183.79	1.09	32.80	0.32	-216.15
Last 5	15:09:15	1200.02	24.78	6.28	186.45	1.01	32.80	0.23	-226.92
Last 5	15:14:15	1500.02	24.63	6.31	187.60	0.99	32.80	0.21	-232.03
Last 5	15:19:15	1800.02	24.55	6.32	188.77	0.92	32.80	0.21	-235.35
Last 5	15:24:15	2100.02	24.57	6.34	188.65	0.94	32.80	0.21	-237.47
Variance 0			-0.15	0.03	1.15			-0.01	-5.10
Variance 1			-0.08	0.01	1.17			-0.00	-3.33
Variance 2			0.02	0.01	-0.12			-0.00	-2.12

Notes

Sample@1524, DUP-04@1424, EB-02@1533, Partly Cloudy 78

Grab Samples

Product Name: Low-Flow System

Date: 2017-05-24 14:20:20

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW BKG-8-8
Site Name Plant Daniel BAW BKG-8
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 65 ft

Pump placement from TOC 58.5 ft

Well Information:

Well ID BAW-7
Well diameter 2 in
Well Total Depth 63.5 ft
Screen Length 10 ft
Depth to Water 26.41 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7751225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.04 in
Total Volume Pumped 32 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:59:08	3600.02	24.27	4.83	40.07	7.11	26.45	3.99	52.90
Last 5	14:04:08	3900.02	24.23	4.82	40.15	6.66	26.45	4.01	52.46
Last 5	14:09:09	4201.02	24.01	4.83	40.11	5.49	26.45	3.98	52.12
Last 5	14:14:09	4501.02	24.16	4.83	40.21	5.04	26.45	3.97	51.92
Last 5	14:19:09	4801.02	24.15	4.83	40.16	4.79	26.45	3.96	51.77
Variance 0			-0.23	0.00	-0.04			-0.03	-0.34
Variance 1			0.15	0.00	0.10			-0.01	-0.19
Variance 2			-0.01	0.01	-0.05			-0.01	-0.16

Notes

Sample@1419 Partly Cloudy 77

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-16 12:00:20

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW
Site Name Plant Daniel BAW wells
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 67 ft

Pump placement from TOC 58.1 ft

Well Information:

Well ID BAW-1
Well diameter 2 in
Well Total Depth 60.6 ft
Screen Length 5 ft
Depth to Water 22.51 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7840493 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:48:23	300.02	24.69	4.64	38.54	0.59	22.53	4.54	87.60
Last 5	11:53:23	600.05	24.59	4.60	38.38	0.54	22.53	4.63	87.99
Last 5	11:58:23	900.03	24.51	4.59	38.45	0.48	22.53	4.67	88.18
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.09	-0.04	-0.16			0.09	0.39
Variance 2			-0.08	-0.00	0.07			0.04	0.18

Notes

Sample@1159, Partly Cloudy 67

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-16 12:34:56

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW
Site Name Plant Daniel BAW wells
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 67 ft

Pump placement from TOC 60.4 ft

Well Information:

Well ID BAW-2
Well diameter 2 in
Well Total Depth 65.4 ft
Screen Length 10 ft
Depth to Water 31.99 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7840493 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.06 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:23:59	300.02	24.14	4.70	38.23	0.70	32.05	4.25	79.30
Last 5	12:28:59	600.02	23.99	4.67	38.43	0.61	32.05	4.19	75.58
Last 5	12:33:59	900.02	23.99	4.65	38.68	0.55	32.50	4.10	74.01
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.15	-0.03	0.20			-0.06	-3.72
Variance 2			0.00	-0.02	0.25			-0.08	-1.57

Notes

Sample@1234, Partly cloudy 68

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-16 13:22:46

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW
Site Name Plant Daniel BAW wells
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 70 ft

Pump placement from TOC 63.4 ft

Well Information:

Well ID BAW-3
Well diameter 2 in
Well Total Depth 68.4 ft
Screen Length 10 ft
Depth to Water 31.44 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7974396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:57:40	300.02	24.10	4.53	47.06	1.91	31.44	0.91	78.23
Last 5	13:02:40	600.02	23.96	4.51	48.07	1.67	31.44	0.69	73.47
Last 5	13:11:36	300.02	23.81	4.49	48.34	1.91	31.44	0.61	70.09
Last 5	13:16:36	600.02	23.89	4.48	48.35	1.67	31.44	0.57	69.63
Last 5	13:21:36	900.03	23.96	4.47	48.26	1.59	31.44	0.55	69.92
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.08	-0.01	0.01			-0.03	-0.47
Variance 2			0.07	-0.01	-0.09			-0.02	0.29

Notes

Sample@1322, Partly Cloudy 70

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-16 14:13:38

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW
Site Name Plant Daniel BAW wells
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 73 ft

Pump placement from TOC 64.9 ft

Well Information:

Well ID BAW-4
Well diameter 2 in
Well Total Depth 69.9 ft
Screen Length 10 ft
Depth to Water 29.05 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.8108299 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:46:46	300.03	24.41	5.10	48.65	1.09	31.44	1.72	45.41
Last 5	13:51:46	600.02	24.17	4.99	49.06	1.27	31.44	0.82	38.22
Last 5	14:01:46	1200.03	23.68	4.95	49.81	0.84	31.44	0.15	28.92
Last 5	14:06:46	1500.02	23.63	4.96	49.99	0.95	31.44	0.14	26.43
Last 5	14:11:46	1800.02	23.69	4.96	50.05	1.06	31.44	0.14	24.43
Variance 0			-0.49	-0.04	0.75			-0.67	-9.30
Variance 1			-0.05	0.00	0.18			-0.01	-2.49
Variance 2			0.06	0.01	0.06			0.00	-2.01

Notes

Sample@1412, FB-01@1340, Partly CLoudy 71

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-16 14:51:59

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW
Site Name Plant Daniel BAW wells
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 72 ft

Pump placement from TOC 64.1 ft

Well Information:

Well ID BAW-5
Well diameter 2 in
Well Total Depth 69.1 ft
Screen Length 10 ft
Depth to Water 32.60 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.8063664 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:38:16	300.02	23.42	6.14	146.48	0.31	32.61	0.11	-43.87
Last 5	14:43:16	600.02	23.35	6.22	146.54	0.31	32.61	0.09	-49.83
Last 5	14:48:16	900.02	23.33	6.23	146.50	0.45	32.61	0.11	-49.80
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.08	0.08	0.06			-0.01	-5.96
Variance 2			-0.02	0.01	-0.03			0.01	0.02

Notes

Sample@1448, EB-01@1500 Partly Cloudy 72

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-16 11:17:58

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Daniel BAW
Site Name Plant Daniel BAW wells
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 66 ft

Pump placement from TOC 58.5 ft

Well Information:

Well ID BAW-7
Well diameter 2 in
Well Total Depth 63.5 ft
Screen Length 10 ft
Depth to Water 26.05 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.779586 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 42 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:56:33	5100.02	23.50	4.52	36.38	3.11	26.05	3.98	89.78
Last 5	11:01:33	5400.02	23.35	4.52	36.44	2.71	26.04	3.98	89.38
Last 5	11:06:33	5700.02	23.28	4.53	36.44	2.39	26.05	3.96	89.25
Last 5	11:11:33	6000.03	23.24	4.53	36.49	2.14	26.05	3.98	89.07
Last 5	11:16:33	6300.03	23.24	4.53	36.51	1.91	26.05	3.96	88.76
Variance 0			-0.07	0.00	-0.01			-0.02	-0.13
Variance 1			-0.04	0.00	0.06			0.01	-0.18
Variance 2			-0.00	-0.00	0.02			-0.02	-0.31

Notes

Sample@1117, DUP -01@1017 Cloudy 67

Grab Samples

APPENDIX - B

STATISTICAL ANALYSES

Interwell Prediction Limits - Significant Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 11/17/2017, 9:40 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	BAW-5	0.05	n/a	10/16/2017	0.19	Yes	18	n/a	n/a	100	n/a	n/a	0.00505	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BAW-4	2.198	n/a	10/16/2017	3.3	Yes	18	0.9776	0.2501	5.556	None	sqrt(x)	0.00188	Param Inter 1 of 2
Calcium (mg/L)	BAW-5	2.198	n/a	10/16/2017	17	Yes	18	0.9776	0.2501	5.556	None	sqrt(x)	0.00188	Param Inter 1 of 2
Chloride (mg/L)	BAW-3	6.921	n/a	10/16/2017	7.7	Yes	18	5.422	0.7425	0	None	No	0.00188	Param Inter 1 of 2
Chloride (mg/L)	BAW-5	6.921	n/a	10/16/2017	9.7	Yes	18	5.422	0.7425	0	None	No	0.00188	Param Inter 1 of 2
Field pH (SU)	BAW-5	5.632	4.415	10/16/2017	6.23	Yes	18	5.023	0.3013	0	None	No	0.0009398	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BAW-4	51.5	n/a	10/16/2017	64	Yes	18	23.03	14.1	5.556	None	No	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BAW-5	51.5	n/a	10/16/2017	110	Yes	18	23.03	14.1	5.556	None	No	0.00188	Param Inter 1 of 2

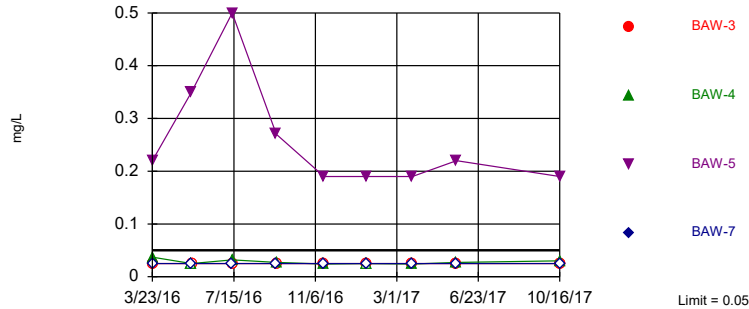
Interwell Prediction Limits - All Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 11/17/2017, 9:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDsND Adj.	Transform	Alpha	Method
Boron (mg/L)	BAW-3	0.05	n/a	10/16/2017	0.025ND	No	18	n/a	n/a	100	n/a	n/a	NP Inter (NDs) 1 of 2
Boron (mg/L)	BAW-4	0.05	n/a	10/16/2017	0.03	No	18	n/a	n/a	100	n/a	n/a	NP Inter (NDs) 1 of 2
Boron (mg/L)	BAW-5	0.05	n/a	10/16/2017	0.19	Yes	18	n/a	n/a	100	n/a	n/a	NP Inter (NDs) 1 of 2
Boron (mg/L)	BAW-7	0.05	n/a	10/16/2017	0.025ND	No	18	n/a	n/a	100	n/a	n/a	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BAW-3	2.198	n/a	10/16/2017	0.86	No	18	0.9776	0.2501	5.556	None	sqrt(x)	0.00188 Param Inter 1 of 2
Calcium (mg/L)	BAW-4	2.198	n/a	10/16/2017	3.3	Yes	18	0.9776	0.2501	5.556	None	sqrt(x)	0.00188 Param Inter 1 of 2
Calcium (mg/L)	BAW-5	2.198	n/a	10/16/2017	17	Yes	18	0.9776	0.2501	5.556	None	sqrt(x)	0.00188 Param Inter 1 of 2
Calcium (mg/L)	BAW-7	2.198	n/a	10/16/2017	0.7	No	18	0.9776	0.2501	5.556	None	sqrt(x)	0.00188 Param Inter 1 of 2
Chloride (mg/L)	BAW-3	6.921	n/a	10/16/2017	7.7	Yes	18	5.422	0.7425	0	None	No	0.00188 Param Inter 1 of 2
Chloride (mg/L)	BAW-4	6.921	n/a	10/16/2017	6.6	No	18	5.422	0.7425	0	None	No	0.00188 Param Inter 1 of 2
Chloride (mg/L)	BAW-5	6.921	n/a	10/16/2017	9.7	Yes	18	5.422	0.7425	0	None	No	0.00188 Param Inter 1 of 2
Chloride (mg/L)	BAW-7	6.921	n/a	10/16/2017	5.6	No	18	5.422	0.7425	0	None	No	0.00188 Param Inter 1 of 2
Field pH (SU)	BAW-3	5.632	4.415	10/16/2017	4.47	No	18	5.023	0.3013	0	None	No	0.0009398 Param Inter 1 of 2
Field pH (SU)	BAW-4	5.632	4.415	10/16/2017	4.96	No	18	5.023	0.3013	0	None	No	0.0009398 Param Inter 1 of 2
Field pH (SU)	BAW-5	5.632	4.415	10/16/2017	6.23	Yes	18	5.023	0.3013	0	None	No	0.0009398 Param Inter 1 of 2
Field pH (SU)	BAW-7	5.632	4.415	10/16/2017	4.53	No	18	5.023	0.3013	0	None	No	0.0009398 Param Inter 1 of 2
Fluoride (mg/L)	BAW-3	0.1	n/a	10/16/2017	0.05ND	No	18	n/a	n/a	100	n/a	n/a	0.00505 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-4	0.1	n/a	10/16/2017	0.05ND	No	18	n/a	n/a	100	n/a	n/a	0.00505 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-5	0.1	n/a	10/16/2017	0.06	No	18	n/a	n/a	100	n/a	n/a	0.00505 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-7	0.1	n/a	10/16/2017	0.05ND	No	18	n/a	n/a	100	n/a	n/a	0.00505 NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-3	2.5	n/a	10/16/2017	2.5ND	No	18	n/a	n/a	88.89	n/a	n/a	0.00505 NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-4	2.5	n/a	10/16/2017	2	No	18	n/a	n/a	88.89	n/a	n/a	0.00505 NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-5	2.5	n/a	10/16/2017	4	No	18	n/a	n/a	88.89	n/a	n/a	0.00505 NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-7	2.5	n/a	10/16/2017	2.5ND	No	18	n/a	n/a	88.89	n/a	n/a	0.00505 NP Inter (NDs) 1 of 2
Total Dissolved Solids (mg/L)	BAW-3	51.5	n/a	10/16/2017	36	No	18	23.03	14.1	5.556	None	No	0.00188 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BAW-4	51.5	n/a	10/16/2017	64	Yes	18	23.03	14.1	5.556	None	No	0.00188 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BAW-5	51.5	n/a	10/16/2017	110	Yes	18	23.03	14.1	5.556	None	No	0.00188 Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BAW-7	51.5	n/a	10/16/2017	34	No	18	23.03	14.1	5.556	None	No	0.00188 Param Inter 1 of 2

Exceeds Limit: BAW-5

Prediction Limit
Interwell Non-parametric

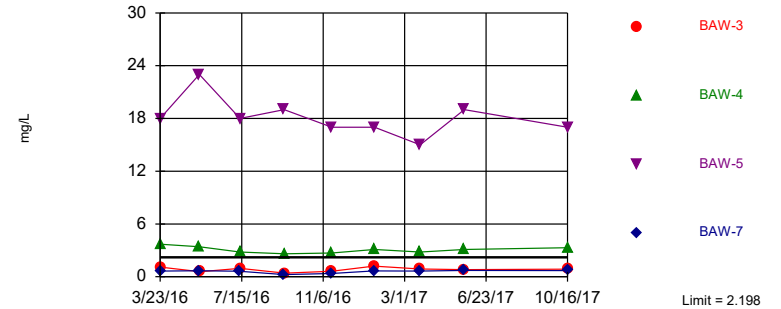


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 18) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.0397. Individual comparison alpha = 0.00505 (1 of 2). Comparing 4 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 11/17/2017 9:37 AM View: Interwell PLs
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Exceeds Limit: BAW-4, BAW-5

Prediction Limit
Interwell Parametric

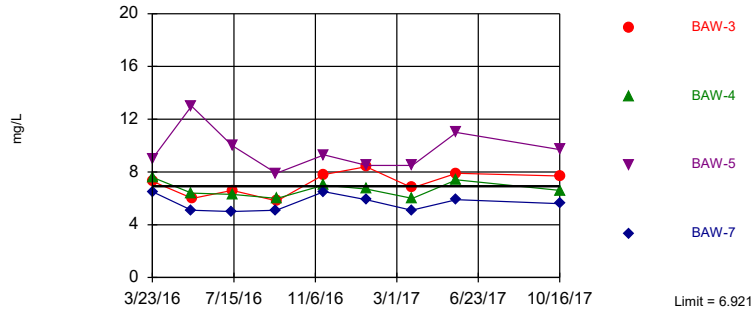


Background Data Summary (based on square root transformation): Mean=0.9776, Std. Dev.=0.2501, n=18, 5.556% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9001, critical = 0.858. Kappa = 2.019 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

Constituent: Calcium Analysis Run 11/17/2017 9:38 AM View: Interwell PLs
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Exceeds Limit: BAW-3, BAW-5

Prediction Limit
Interwell Parametric

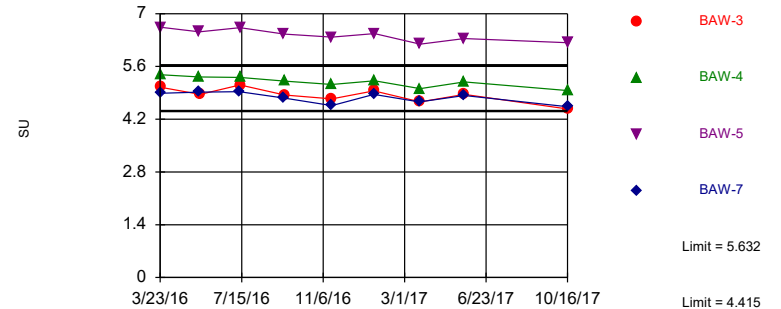


Background Data Summary: Mean=5.422, Std. Dev.=0.7425, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9775, critical = 0.858. Kappa = 2.019 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

Constituent: Chloride Analysis Run 11/17/2017 9:38 AM View: Interwell PLs
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Exceeds Limits: BAW-5

Prediction Limit
Interwell Parametric

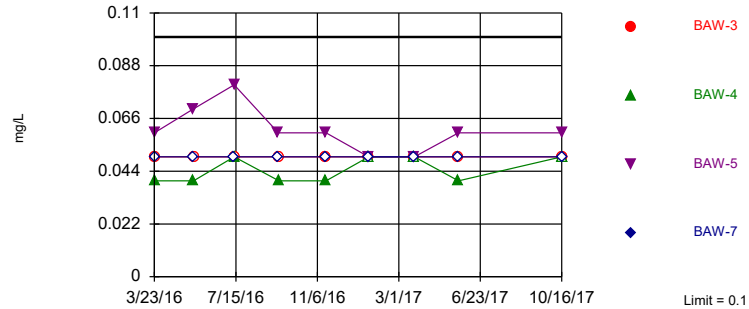


Background Data Summary: Mean=5.023, Std. Dev.=0.3013, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9422, critical = 0.858. Kappa = 2.019 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009398. Comparing 4 points to limit.

Constituent: Field pH Analysis Run 11/17/2017 9:38 AM View: Interwell PLs
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Within Limit

Prediction Limit
Interwell Non-parametric

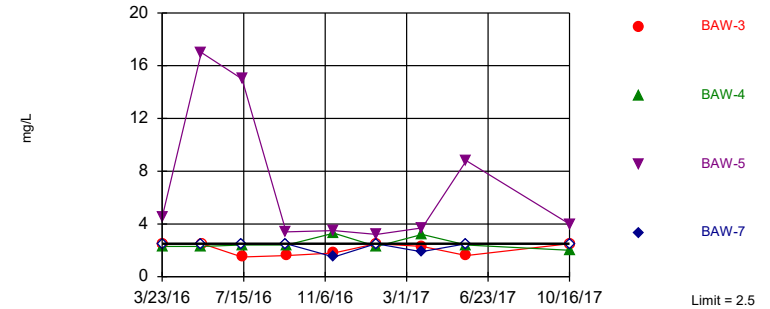


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 18) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.0397. Individual comparison alpha = 0.00505 (1 of 2). Comparing 4 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 11/17/2017 9:38 AM View: Interwell PLs
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Within Limit

Prediction Limit
Interwell Non-parametric

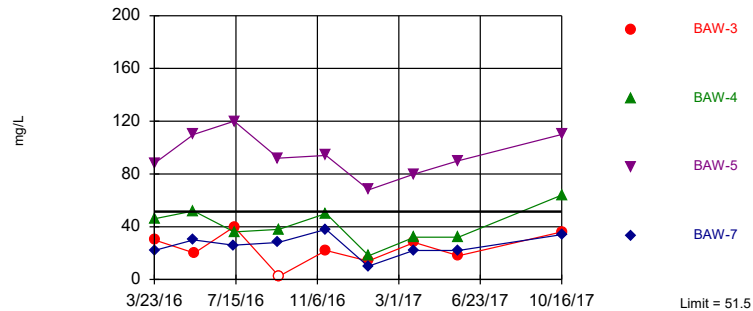


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 18 background values. 88.89% NDs. Annual per-constituent alpha = 0.0397. Individual comparison alpha = 0.00505 (1 of 2). Comparing 4 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Sulfate Analysis Run 11/17/2017 9:38 AM View: Interwell PLs
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Exceeds Limit: BAW-4, BAW-5

Prediction Limit
Interwell Parametric



Background Data Summary: Mean=23.03, Std. Dev.=14.1, n=18, 5.556% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8906, critical = 0.858. Kappa = 2.019 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

Constituent: Total Dissolved Solids Analysis Run 11/17/2017 9:38 AM View: Interwell PLs
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

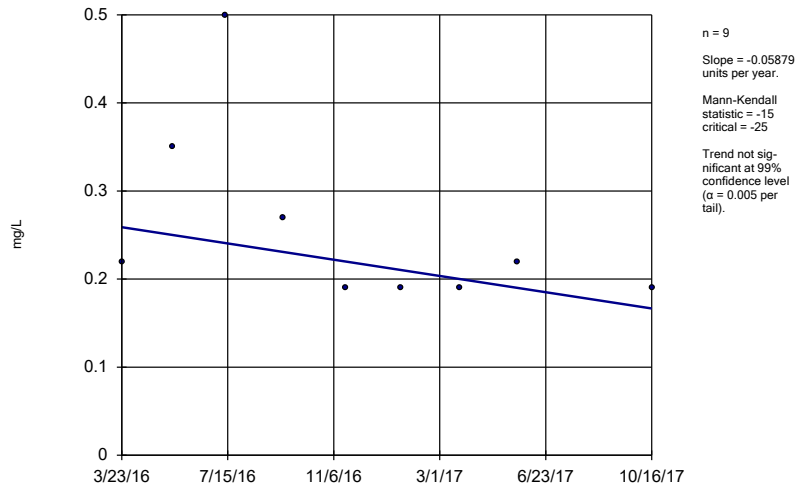
Trend Test Summary Table

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 12/4/2017, 3:00 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	BAW-5	-0.05879	-15	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BAW-4	-0.0353	-2	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BAW-5	-1.674	-13	-25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-3	0.9089	12	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-5	-0.119	-1	-25	No	9	0	n/a	n/a	0.01	NP
Field pH (SU)	BAW-5	-0.2758	-26	-25	Yes	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BAW-4	-5.203	-5	-25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BAW-5	-5.367	-3	-25	No	9	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

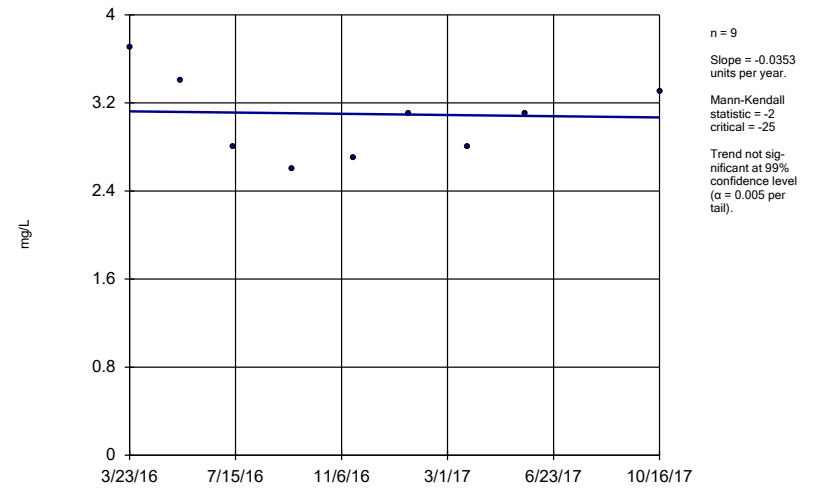
BAW-5



Constituent: Boron Analysis Run 12/4/2017 2:57 PM View: Trend Tests
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator

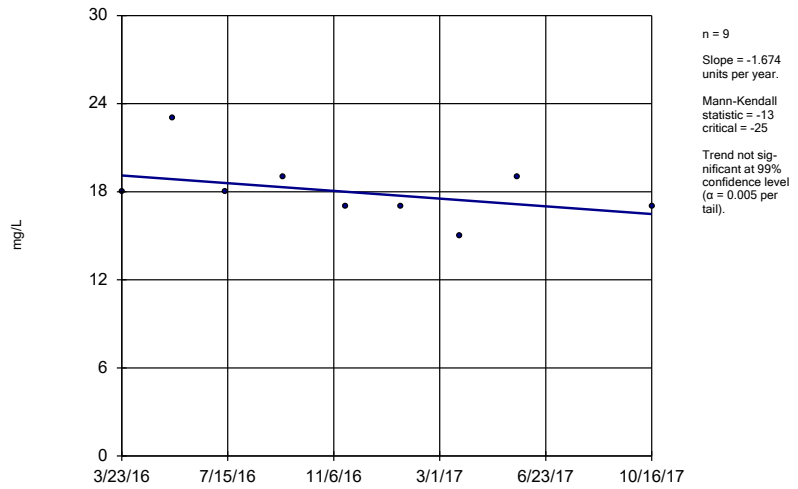
BAW-4



Constituent: Calcium Analysis Run 12/4/2017 2:57 PM View: Trend Tests
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator

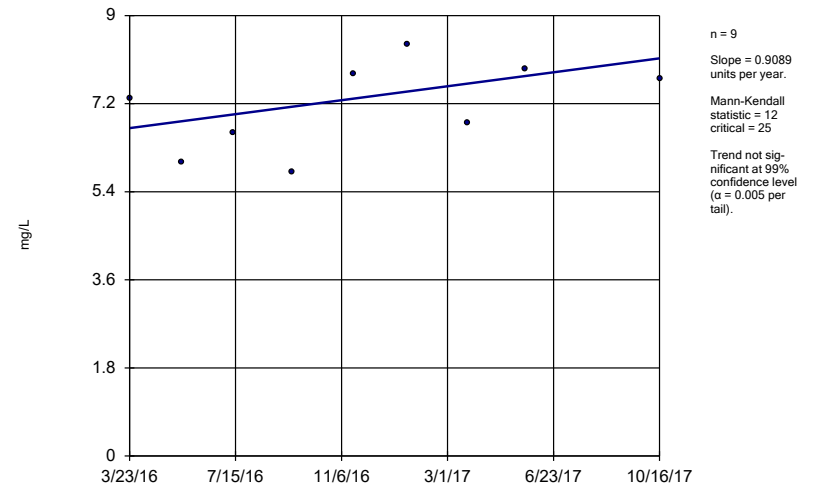
BAW-5



Constituent: Calcium Analysis Run 12/4/2017 2:57 PM View: Trend Tests
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR

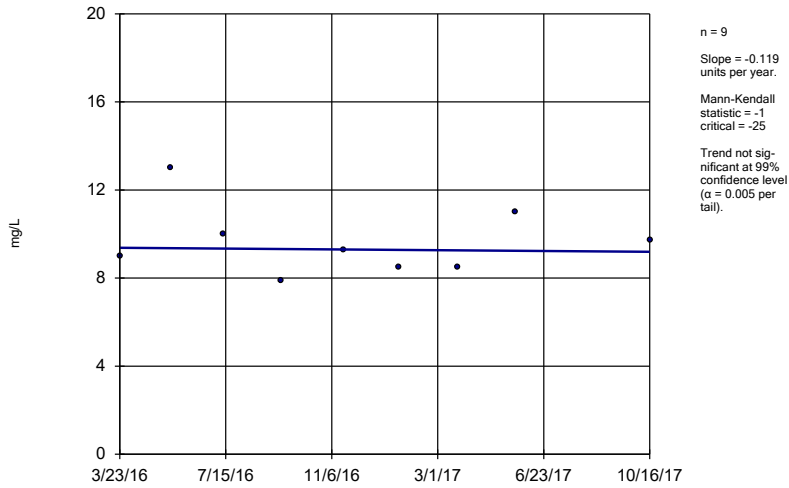
Sen's Slope Estimator

BAW-3



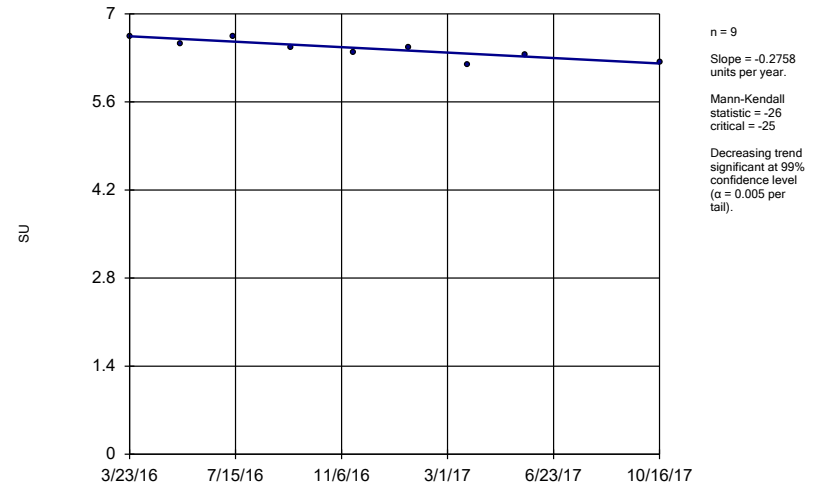
Constituent: Chloride Analysis Run 12/4/2017 2:57 PM View: Trend Tests
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator BAW-5



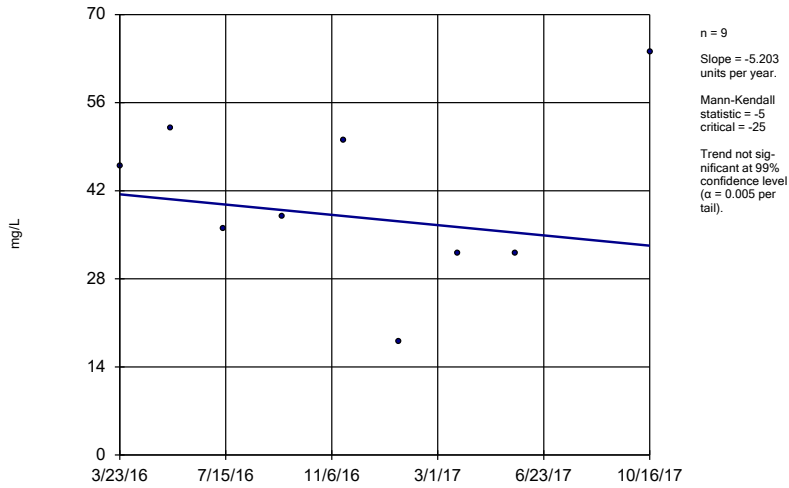
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Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator BAW-5



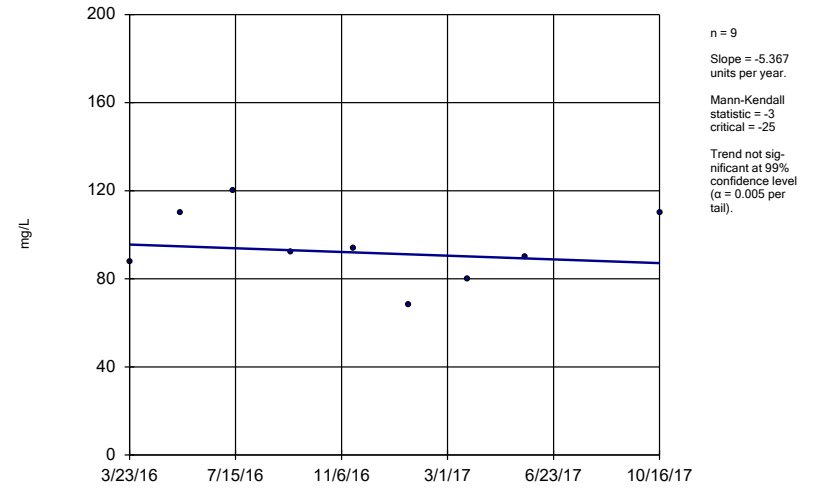
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Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator BAW-4



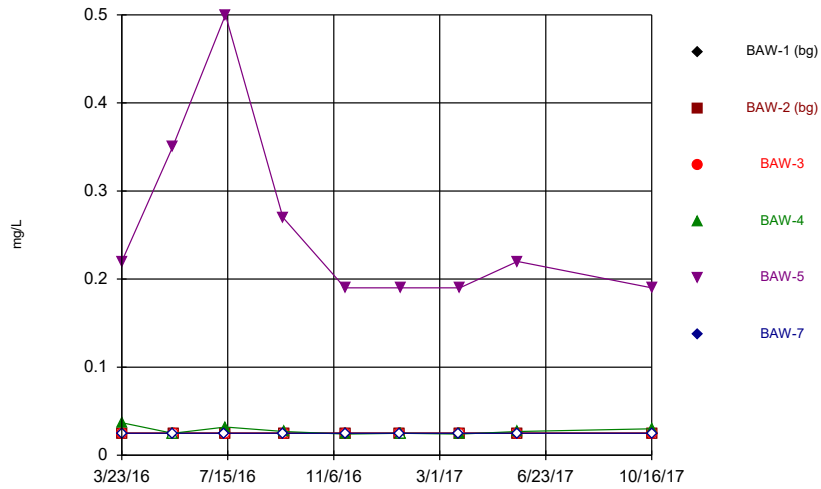
Constituent: Total Dissolved Solids Analysis Run 12/4/2017 2:58 PM View: Trend Tests
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator BAW-5



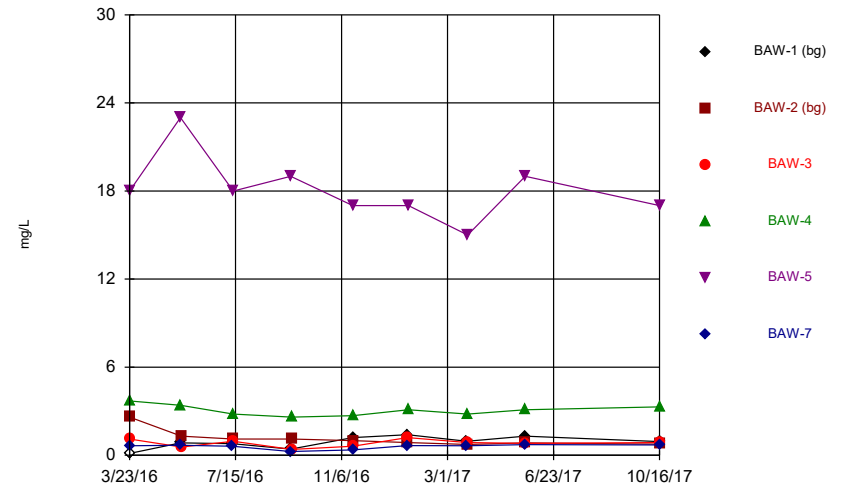
Constituent: Total Dissolved Solids Analysis Run 12/4/2017 2:58 PM View: Trend Tests
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Time Series



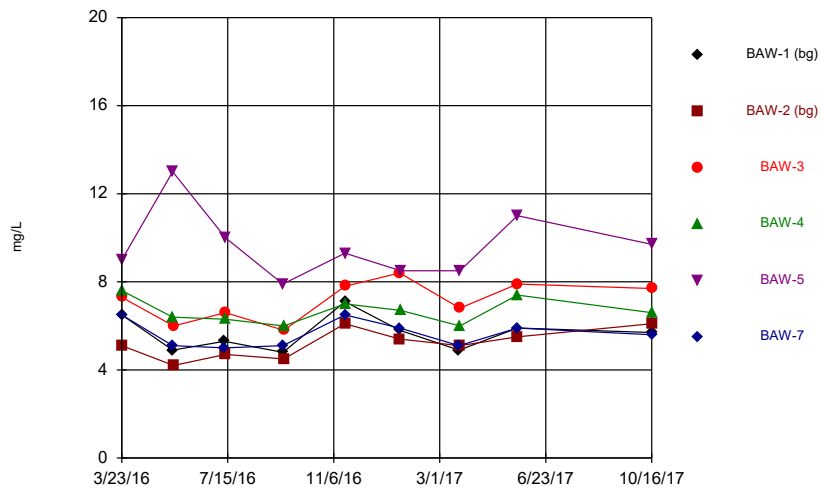
Constituent: Boron Analysis Run 11/17/2017 10:57 AM View: Time Series
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Time Series



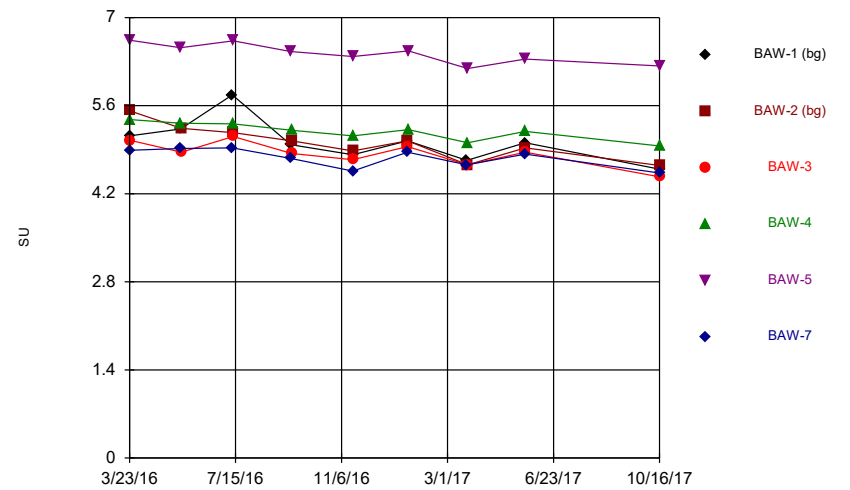
Constituent: Calcium Analysis Run 11/17/2017 10:57 AM View: Time Series
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Time Series



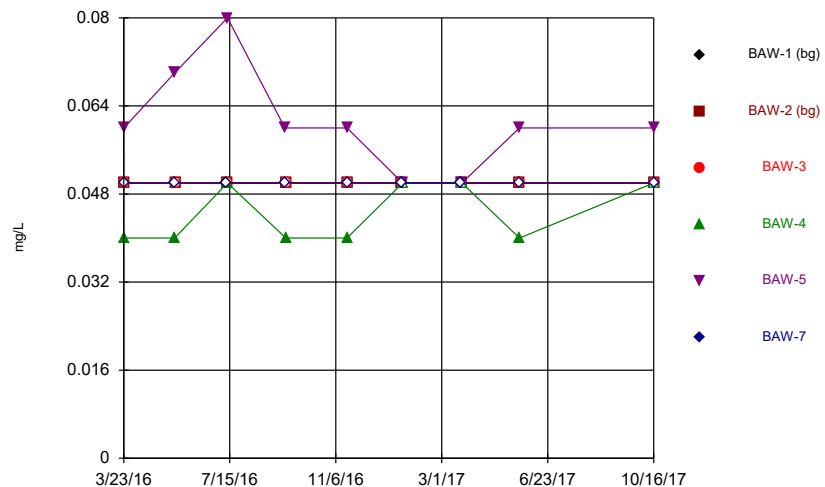
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Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Time Series



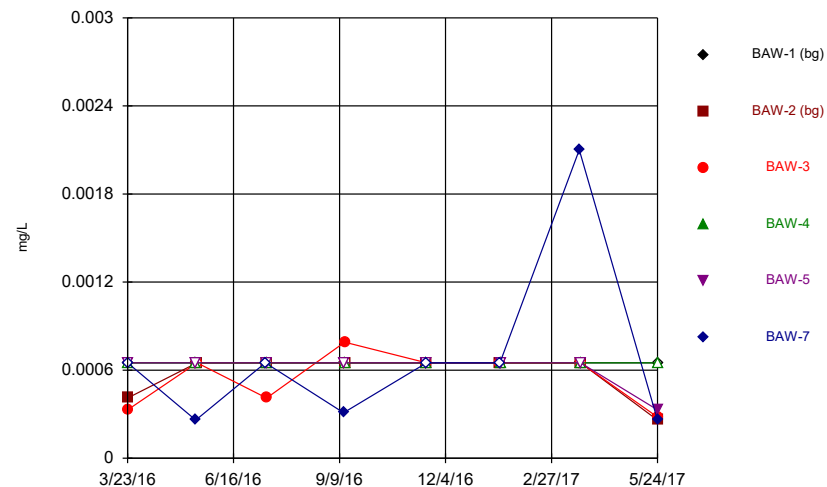
Constituent: Field pH Analysis Run 11/17/2017 10:57 AM View: Time Series
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Time Series



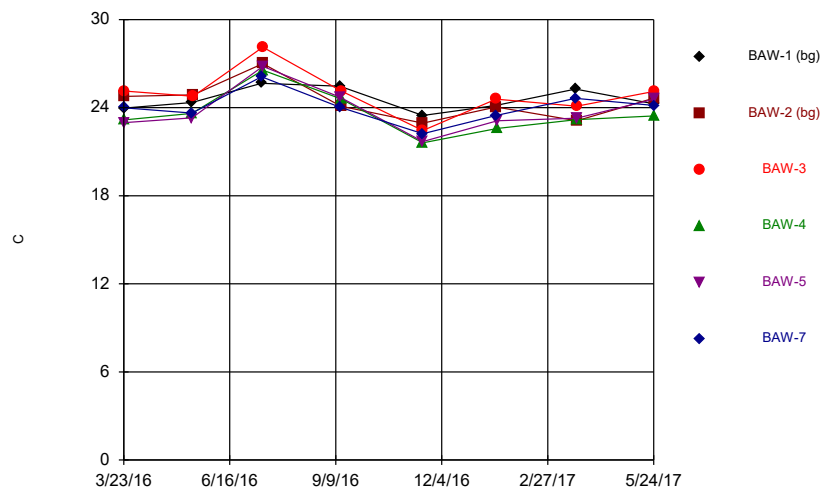
Constituent: Fluoride Analysis Run 11/17/2017 10:57 AM View: Time Series
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Time Series



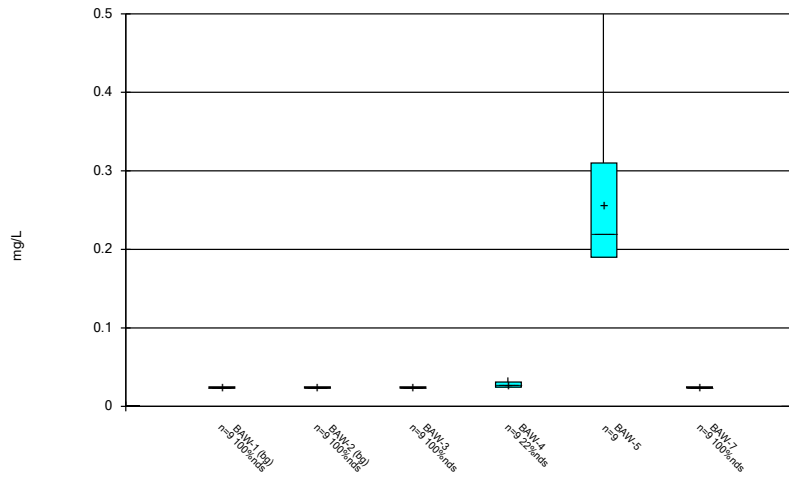
Constituent: Selenium Analysis Run 11/17/2017 10:57 AM View: Time Series
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Time Series



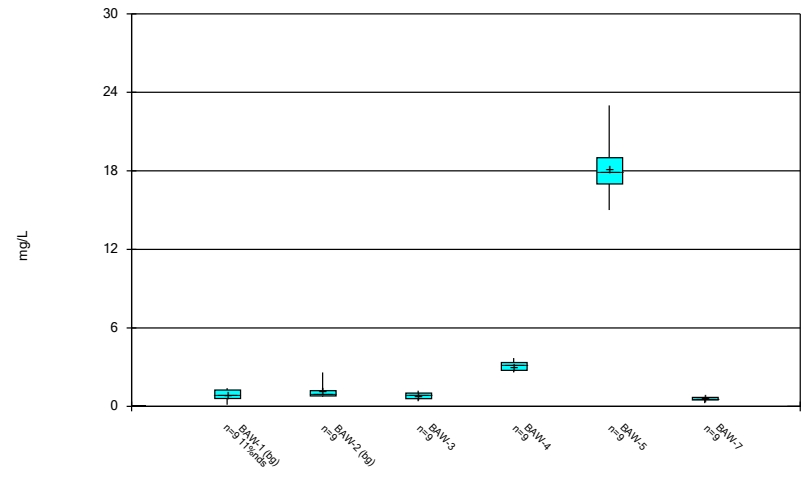
Constituent: Temperature Analysis Run 11/17/2017 10:57 AM View: Time Series
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



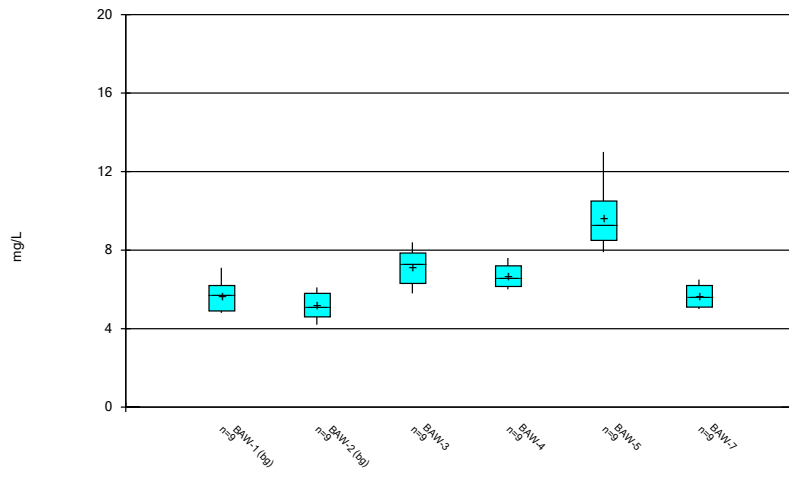
Constituent: Boron Analysis Run 11/17/2017 10:58 AM View: Time Series
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



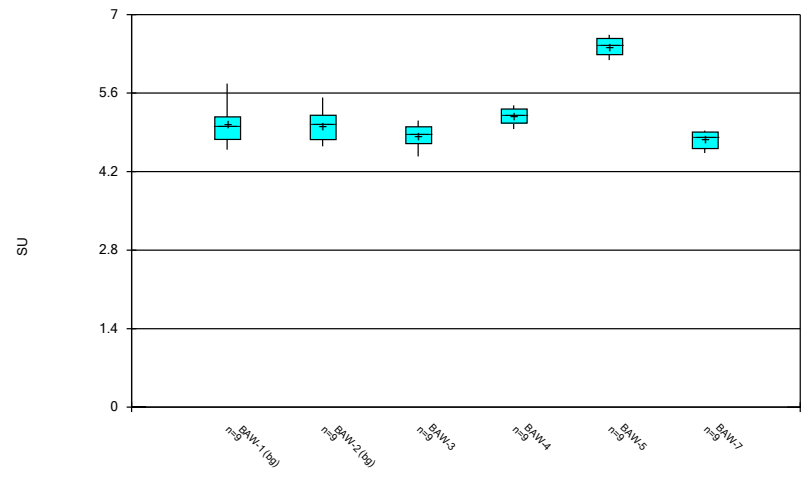
Constituent: Calcium Analysis Run 11/17/2017 10:58 AM View: Time Series
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



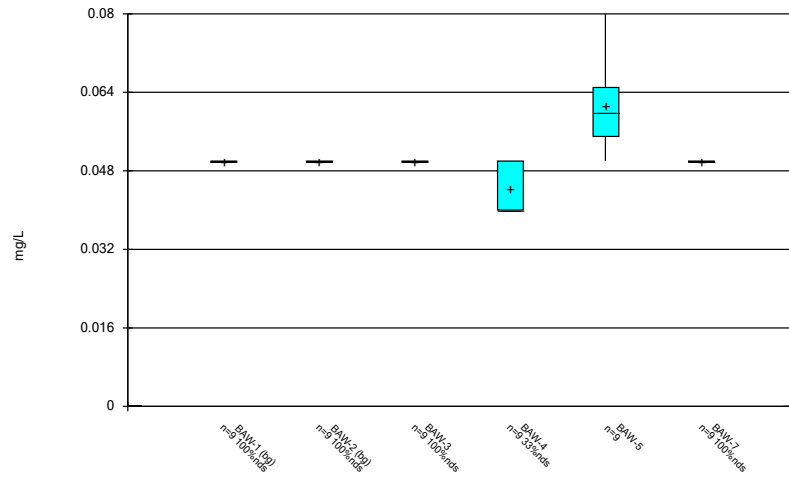
Constituent: Chloride Analysis Run 11/17/2017 10:58 AM View: Time Series
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



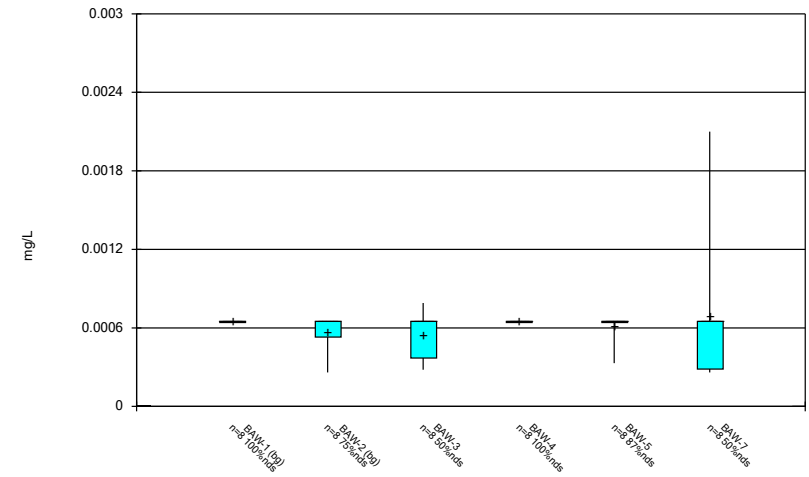
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Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



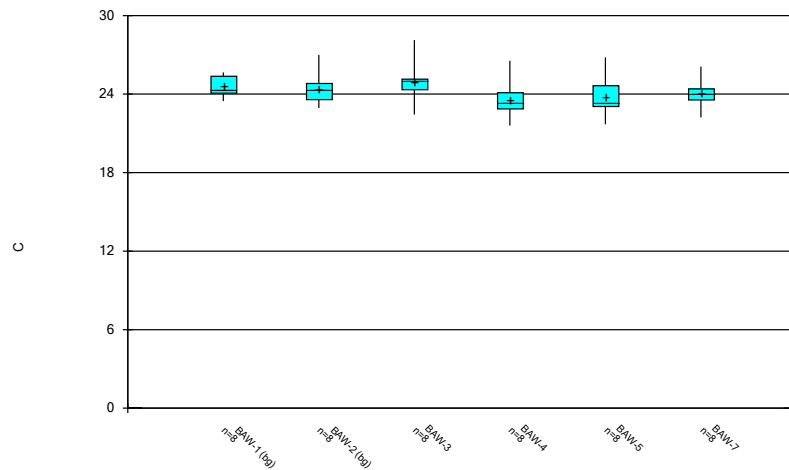
Constituent: Fluoride Analysis Run 11/17/2017 10:58 AM View: Time Series
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



Constituent: Selenium Analysis Run 11/17/2017 10:58 AM View: Time Series
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



Constituent: Temperature Analysis Run 11/17/2017 10:58 AM View: Time Series
 Plant Daniel Client: Southern Company Data: Bottom Ash CCR